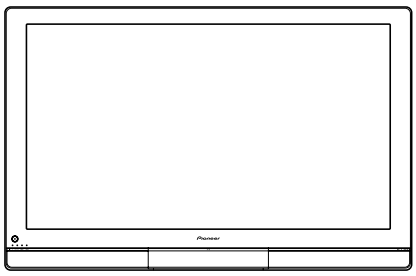
Pioneer sound.vision.soul

Service Manual



PDP-436SXE

ORDER NO.
ARP3333

PLASMA DISPLAY SYSTEM

PDP-436SXE
PDP-436RXE

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-436SXE	WYVIXK5	AC220 - 240V	
PDP-436RXE	WYVIXK5	AC220 - 240V	
PDP-436RXE	WYVI5	AC220 - 240V	

For details, refer to "Important Check Points for good servicing".

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ⓒ**PIONEER CORPORATION 2006**

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SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

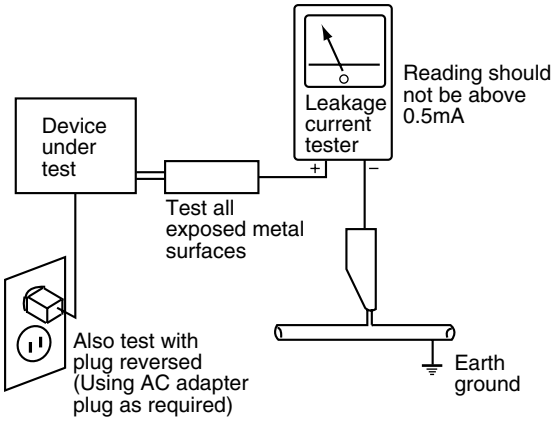
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. Power Cord
2. AC Inlet
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■ High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

If the procedures described in "7.1.4 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM" are performed before the power is turned off, the voltage will be discharged in about 30 seconds.

1. POWER SUPPLY Unit.....(203V)
2. 43 X DRIVE Assy ..... (–180V to 203V)
3. 43 Y DRIVE Assy ..... (500V)
4. 43 SCAN A Assy ..... (500V)
5. 43 SCAN B Assy ..... (500V)
6. SUS CLAMP 1 Assy .....(–180V to 203V)
7. SUS CLAMP 2 Assy .....(–180V to 203V)

: Part is Charged Section.
: Part is the High Voltage Generating Points other than the Charged Section.

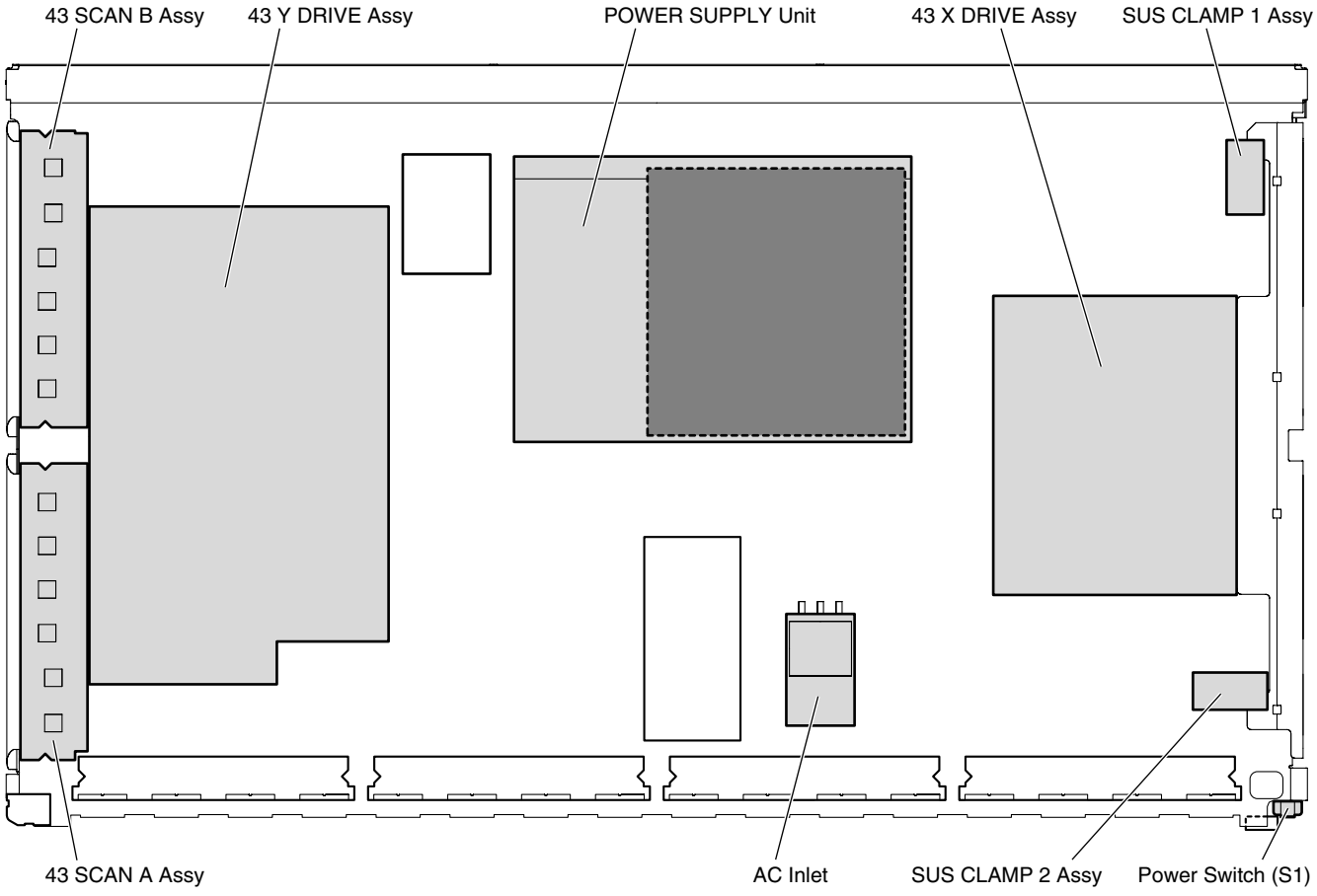


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

Item			43" Plasma Display, Model: PDP-436SXE/PDP-436RXE
Number of Pixels			1024 x 768 pixels
Audio Amplifier			13 W + 13 W (1 kHz, 10 %, 8 Ω)
Speakers			Bass-reflex type (two-way system)
Surround System			SRS/FOCUS/TruBass
Power Requirement			220–240 V AC, 50/60 Hz, 291 W : SXE / 287 W : RXE (0.8 W Standby : SXE / 0.4 W Standby : RXE)
Dimensions			1076 (W) X 696 (H) X 116 (D) mm
Weight			31.8 kg (70.1 lbs.) (SXE), 31.2 kg (68.8 lbs.) (RXE)
Colour System		Analogue	PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
		Digital (*)	PAL/SECAM
TV Function (Analogue)	Receiving System		B/G, D/K, I, L/L'
	Tuner	VHF/UHF	E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch
		CATV	Hyper-band, S1–S41ch
	Auto Channel Preset		99 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		NICAM/A2
TV Function (Digital)	Receiving System (*)		DVB-T (2K/8K COFDM)
	Tuner (*)	VHF/UHF	VHF Band III (170 to 230 MHz) and UHF Band IV, V (470 to 862 MHz)
	Auto Channel Preset (*)		999 ch, Auto Preset, Auto Label, Auto Sort
	STEREO (*)		MPEG layer I/II, Dolby Digital
Terminals	Rear	INPUT 1	SCART (AV in, RGB in, TV out)
		INPUT 2	SCART (AV in/out, S-VIDEO in, AV link *1), Component Video in
		INPUT 3	SCART (AV in/out, S-VIDEO in, RGB in, AV link *1), HDMI in*2
		Antenna	75 Ω Din Type for VHF/UHF in (Analogue)
			75 Ω Din Type for VHF/UHF in (Digital) (*)
			75 Ω Din Type for VHF/UHF out (Digital) (*)
	Front	INPUT 4	S-VIDEO,AV in
AUDIO OUTPUT Terminal		(Rear)	AUDIO out (Fixed)
DIGITAL OUT Terminal (*)			Digital audio output (Optical)
COMMON INTERFACE (*)		(Rear)	CA Module

*1 Switchable (*) : 436SXE Model only

*2 This conforms to HDMI1.1 and HDCP1.1.
HDMI (High Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

- Design and specifications are subject to change without notice.

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- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories. (SXE model only)
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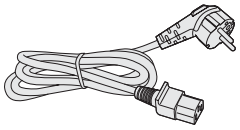
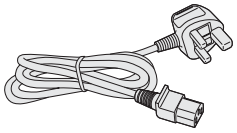
■ Accessories

Power cord (2 m)

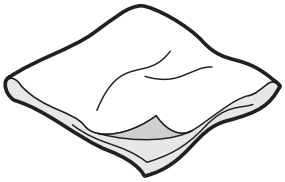


(ADG1214)
(For Europe, except UK and Eire)



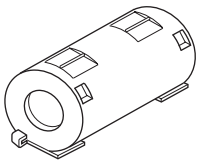
(ADG1223)
(For UK and Eire)

Only the power cord that is appropriate in your country or region is supplied.



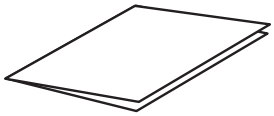
Cleaning cloth
(AED1285)

(ATX1039)

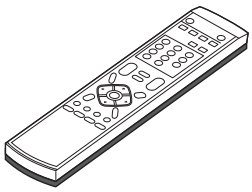


Ferrite core

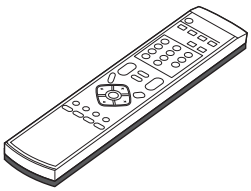
Cable tie
(for Ferrite core)



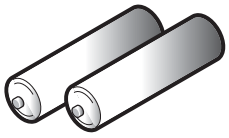
Warranty card



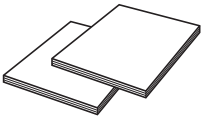
Remote control unit
(SXE : AXD1515)



Remote control unit
(RXE : AXD1516)



AA size battery x 2



Two operating instructions

A

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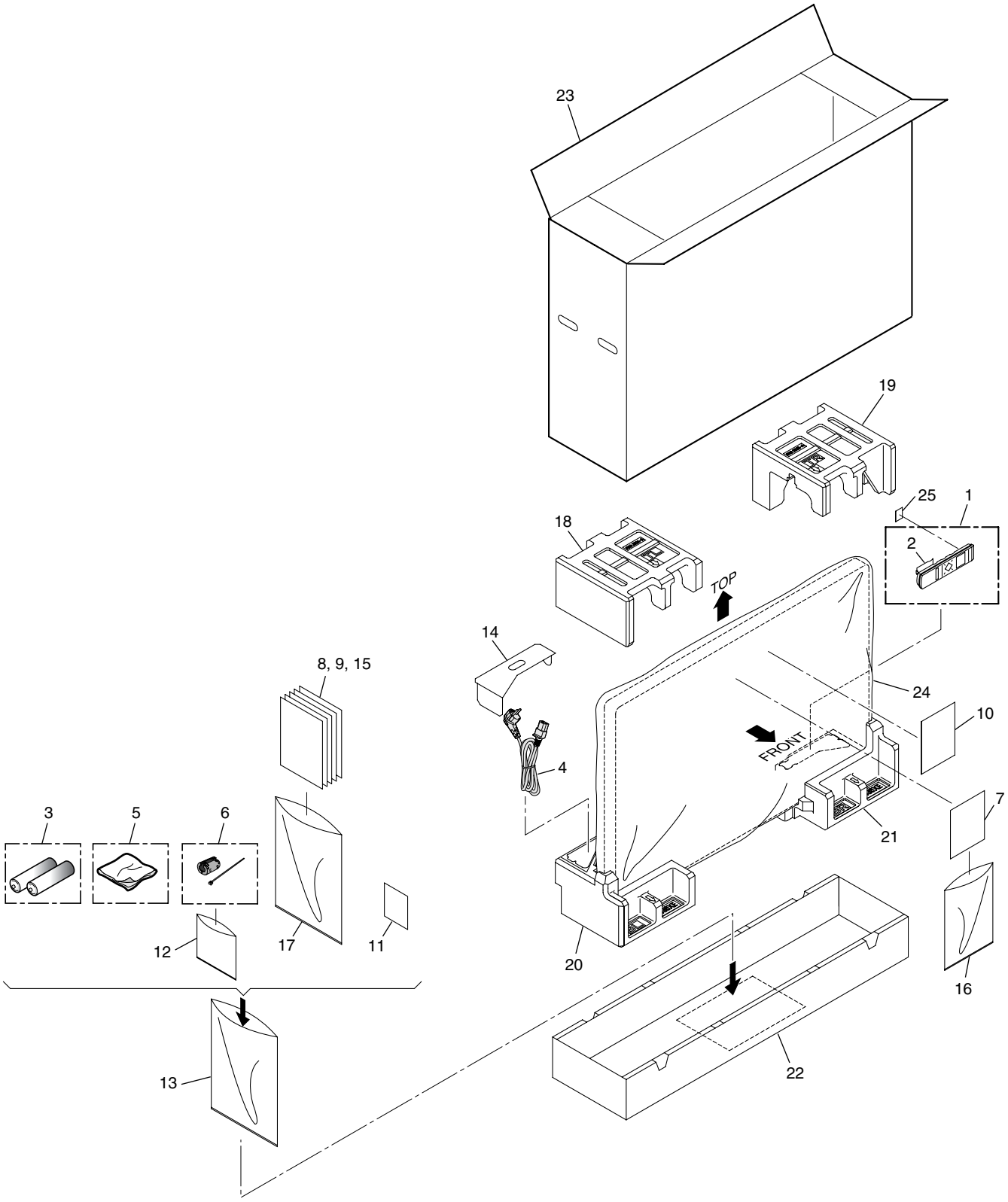
2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING SECTION



(1) PACKING PARTS LIST

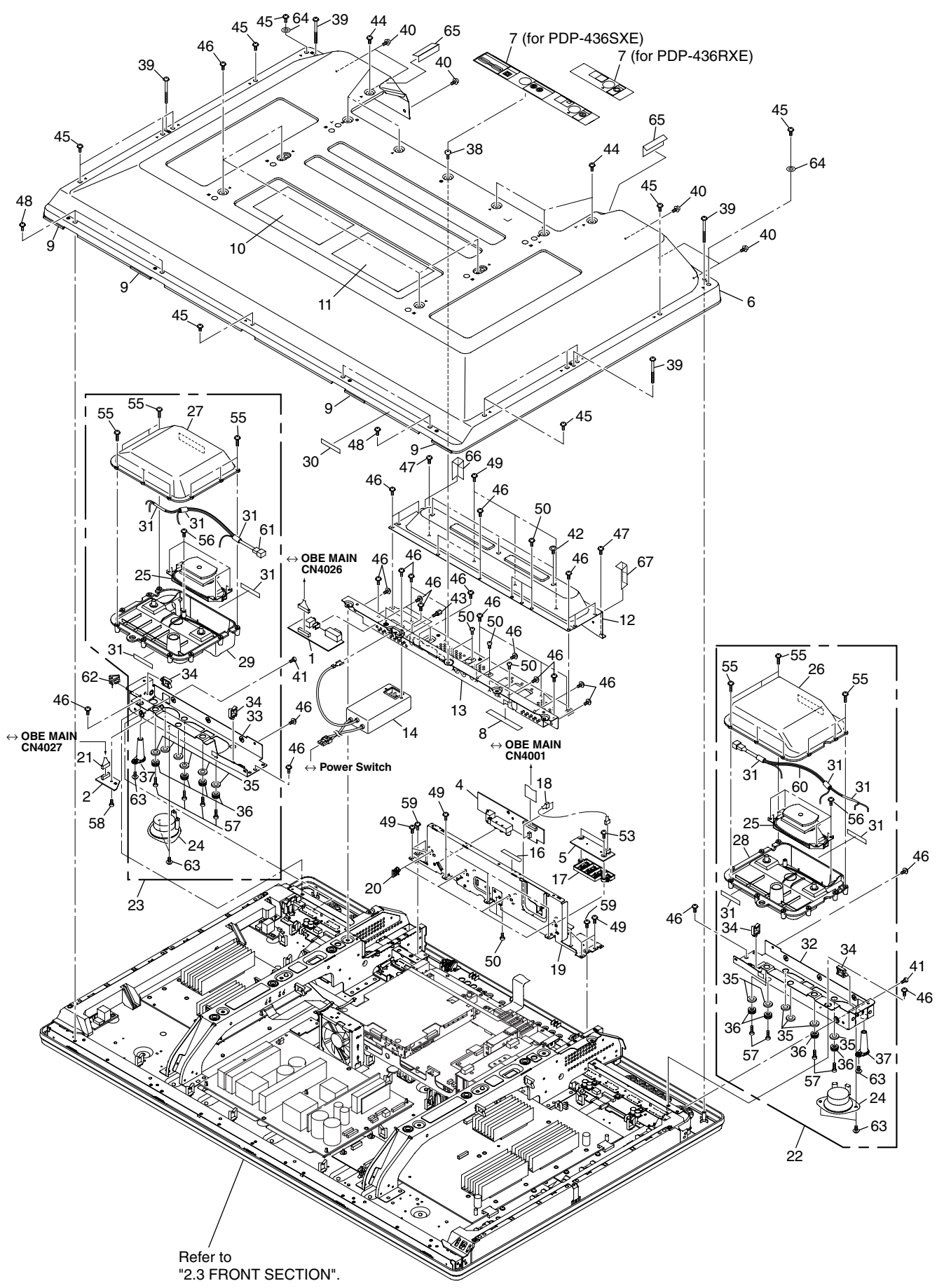
Mark	No.	Description	Part No.
	1	Remote Control Unit	See Contrast table (2)
	2	Battery Cover	AZA7424
NSP	3	Dry Cell Battery (R6P, AA)	VEM1031
⚠	4	Power Cord (2 m)	ADG1214
	5	Cleaning cloth	AED1285
⚠	6	Ferrite Core	ATX1039
NSP	7	Warranty	ARY1114
	8	Operating Instructions (Italian, Spanish, Dutch)	See Contrast table (2)
	9	Operating Instructions (English, French, German)	See Contrast table (2)
	10	Caution Card	ARM1232
	11	Cleaning Caution	ARM1283
	12	Vinyl Bag	AHG1337
	13	Air Cap Bag	AHG1367
	14	Power Cord Case	See Contrast table (2)
	15	Block Diagram	See Contrast table (2)
	16	Polyethylene Bag	See Contrast table (2)
NSP	17	Vinyl Bag	AHG1340
	18	Pad (T-L)	See Contrast table (2)
	19	Pad (T-R)	See Contrast table (2)
	20	Pad (B-L)	See Contrast table (2)
	21	Pad (B-R)	See Contrast table (2)
	22	Under Carton	See Contrast table (2)
	23	Upper Carton	See Contrast table (2)
	24	Mirror Mat	See Contrast table (2)
	25	WEEE Label	AAX3271

(2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	1	Remote Control Unit	AXD1515	AXD1516	AXD1516
	8	Operating Instructions (Italian, Spanish, Dutch)	ARC1553	ARC1552	ARC1551
	9	Operating Instructions (English, French, German)	ARE1407	ARE1406	ARE1405
	14	Power Cord Case	AHC1076	AHC1076	AHC1075
	15	Block Diagram	ARY1183	ARY1183	Not used
	16	Polyethylene Bag	AHG1326	AHG1326	Not used
NSP	16	Vinyl Bag	Not used	Not used	AHG1340
	18	Pad (436XE T-L)	AHA2524	AHA2524	Not used
	18	Pad (436SX T-L)	Not used	Not used	AHA2467
	19	Pad (436XE T-R)	AHA2525	AHA2525	Not used
	19	Pad (436SX T-R)	Not used	Not used	AHA2468
	20	Pad (436XE B-L)	AHA2526	AHA2526	Not used
	20	Pad (436SX B-L)	Not used	Not used	AHA2469
	21	Pad (436XE B-R)	AHA2527	AHA2527	Not used
	21	Pad (436SX B-R)	Not used	Not used	AHA2470
	22	Under Carton (436XE)	AHD3454	AHD3454	Not used
	22	Under Carton (436)	Not used	Not used	AHD3346
	23	Upper Carton (436SXE)	AHD3445	Not used	Not used
	23	Upper Carton (436RXE)	Not used	AHD3444	AHD3467
	24	Mirror Mat	AHG1327	AHG1327	AHG1284

2.2 REAR SECTION



(1) REAR SECTION PARTS LIST

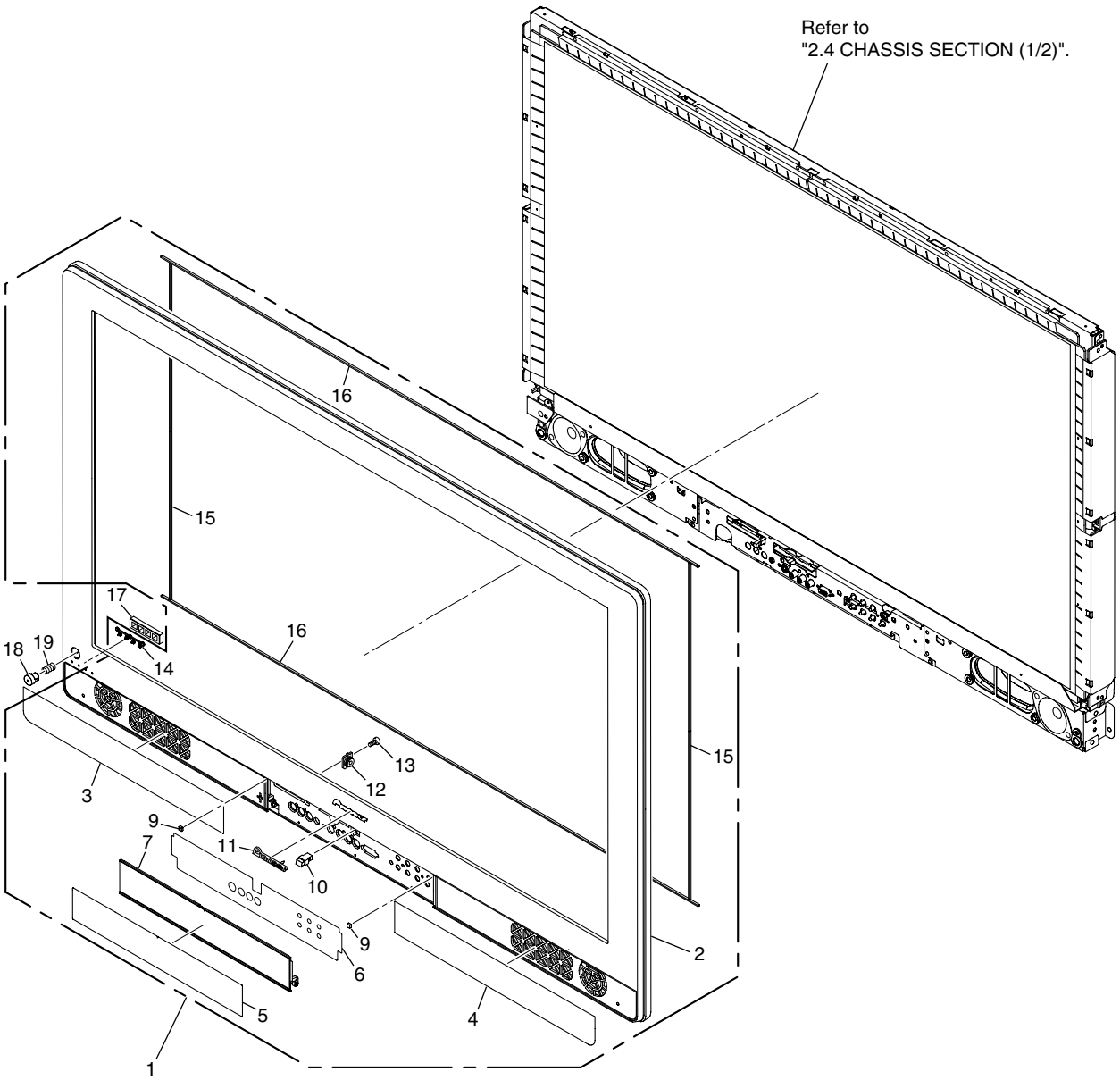
Mark	No.	Description	Part No.
	1	SR Assy	AWW1088
	2	LED Assy	AWW1091
	3	•••••	
	4	FRONT Assy	AWW1090
	5	KEY Assy	AWW1093
	6	Rear Case (436SX)	ANE1648
	7	Terminal Label	See Contrast table (2)
⚠	8	Cushion	AED1288
	9	Rear Case Cushion	AEB1439
	10	Bolt Caution Label	See Contrast table (2)
NSP	11	Name Label	See Contrast table (2)
	12	Under Cover (436SX)	ANE1649
	13	Terminal Panel E	See Contrast table (2)
⚠	14	AC Inlet (CN1)	AKP1275
	15	•••••	
⚠	16	FFC Cushion	AEB1442
	17	Control Button (SX)	AAC1556
	18	4P Housing Wire (J126)	ADX3206
	19	Front Shield Chassis	ANK1816
	20	Wire Saddle	AEC2031
	21	8P Housing Wire (J127)	ADX3207
	22	Speaker Box Assy L	AMW1006
	23	Speaker Box Assy R	AMW1007
NSP	24	Speaker (Tweeter)	•••••
NSP	25	Speaker (Woofer)	•••••
NSP	26	Speaker Box L	•••••
NSP	27	Speaker Box R	•••••
NSP	28	Speaker Buffle L	•••••
NSP	29	Speaker Buffle R	•••••
NSP	30	Serial Sheet	AAX3143
NSP	31	Cushion	•••••
NSP	32	Speaker Stay L	•••••
NSP	33	Speaker Stay R	•••••
NSP	34	Wire Saddle	•••••
NSP	35	Insulation Bush	•••••
NSP	36	Insulation Spacer	•••••
NSP	37	Spacer	•••••
	38	Screw	ABA1341
	39	Screw (3 x 40P)	ABA1332
	40	Hex Head Screw	ABA1345
	41	Screw	ABA1338
	42	Screw	ABA1340
	43	Hexagon Screw	BBA1051
	44	Screw	AMZ30P060FTB
	45	Screw	TBZ40P080FTB
	46	Screw	AMZ30P060FTB
	47	Screw	ABZ30P080FTB
	48	Screw	BBZ40P180FTB
	49	Screw	APZ30P100FTB
	50	Screw	BPZ30P080FTB
	51	•••••	
	52	•••••	
	53	Screw	BBB30P120FNI
	54	•••••	
NSP	55	Screw	•••••
NSP	56	Screw	•••••
NSP	57	Screw	•••••
	58	Screw	AMZ30P080FTC
	59	Screw	ABA1322
NSP	60	4P Housing Wire (J201)	•••••
NSP	61	4P Housing Wire (J101)	•••••
	62	Locking Wire Saddle	AEC1948
NSP	63	Screw	•••••
	64	Washer	WC40FTB
	65	Protect sheet C	AED1300
	66	Protect sheet B	AED1299
	67	Protect sheet A	AED1298

(2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	7	Terminal Label (SXE)	AAX3241	Not used	Not used
	7	Terminal Label (RXE)	Not used	AAL3240	AAL3242
	10	Bolt Caution Label XE	AAX3243	AAX3243	AAX3244
NSP	11	Name Label (436SXE)	AAL2724	Not used	Not used
NSP	11	Name Label (436RXE)	Not used	AAL2723	AAL2725
	13	Terminal Panel E SXE	ANC2385	Not used	Not used
	13	Terminal Panel E RXE	Not used	ANC2384	ANC2384

2.3 FRONT SECTION



(1) FRONT SECTION PARTS LIST

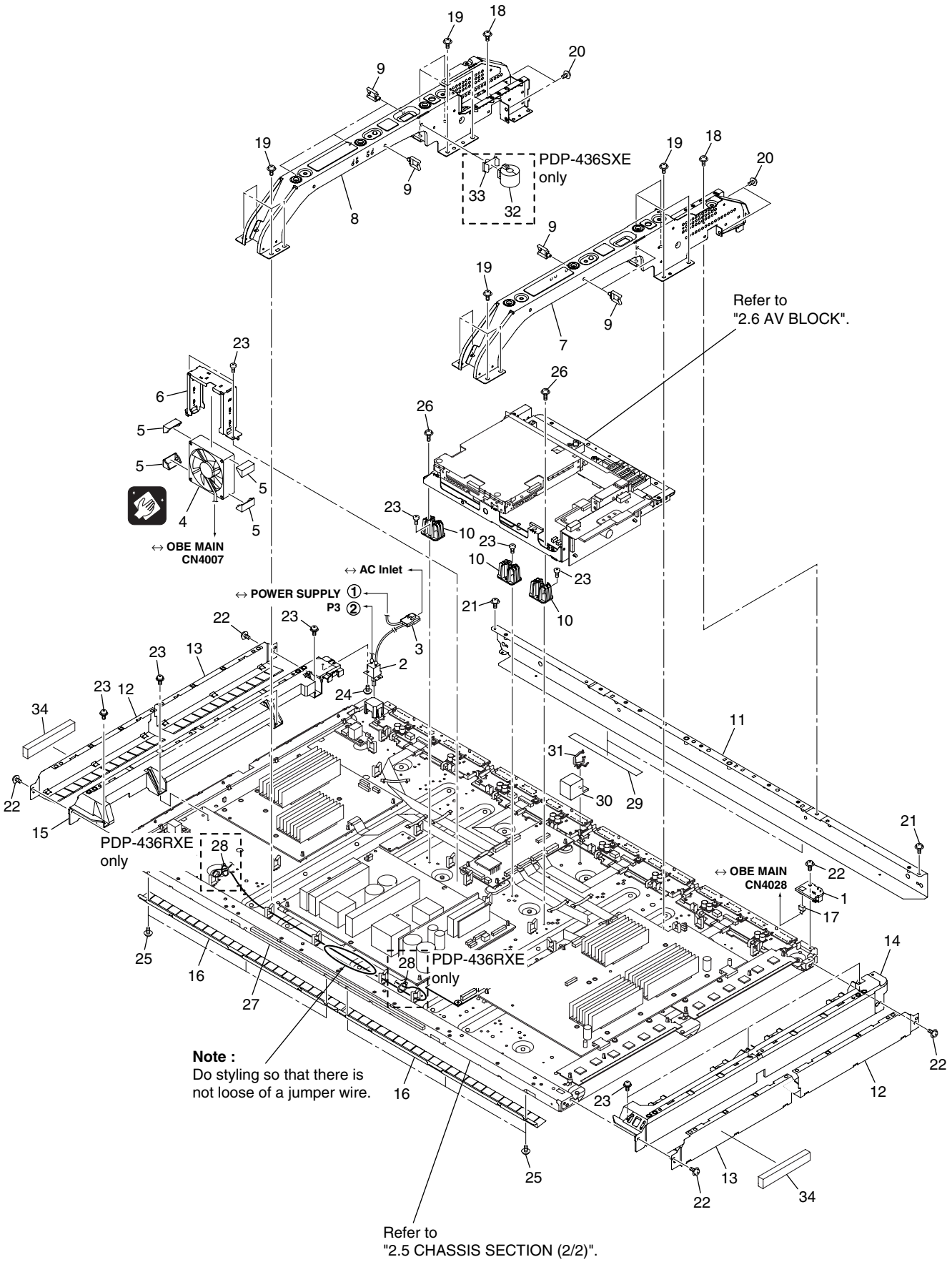
Mark	No.	Description	Part No.
	1	Front Case Assy 43	See Contrast table (2)
NSP	2	Front Case (436SX)	AMB2875
	3	Punching Sheet (L)	See Contrast table (2)
	4	Punching Sheet (R)	See Contrast table (2)
	5	Punching Sheet E (door)	AAS1008
	6	Front Terminal Sheet E	AAK2875
	7	Door	AAN1485
	8	•••••	
	9	Door Cushion	AED1268
	10	Catcher	AEC2040
	11	Pioneer Badge	AAM1096
	12	Gear Damper	AXA1020
	13	Screw	APZ30P100FTB
NSP	14	LED Lens	AAK2848
	15	Panel Cushin V (43)	AED1256
	16	Panel Cushin H (43)	AED1286
	17	Blind Cushion (436SX)	AEB1420
	18	Power Button	AAD4133
	19	Coil Spring	ABH1120

(2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	1	Front Case Assy 43SXE	AMB2892	Not used	Not used
	1	Front Case Assy 43RXE	Not used	AMB2891	AMB2891
	3	Punching Sheet SXE (L)	AAS1013	Not used	Not used
	3	Punching Sheet E (L)	Not used	AAS1005	AAS1005
	4	Punching Sheet SXE (R)	AAS1007	Not used	Not used
	4	Punching Sheet RXE (R)	Not used	AAS1006	AAS1006

2.4 CHASSIS SECTION (1/2)


PDP-436SXE only
Refer to "2.6 AV BLOCK".
↔ OBE MAIN CN4007
↔ AC Inlet
↔ POWER SUPPLY ①
P3 ②
PDP-436RXE only
↔ OBE MAIN CN4028
PDP-436RXE only
Note :
Do styling so that there is not loose of a jumper wire.
Refer to "2.5 CHASSIS SECTION (2/2)".

(1) CHASSIS SECTION (1/2) PARTS LIST

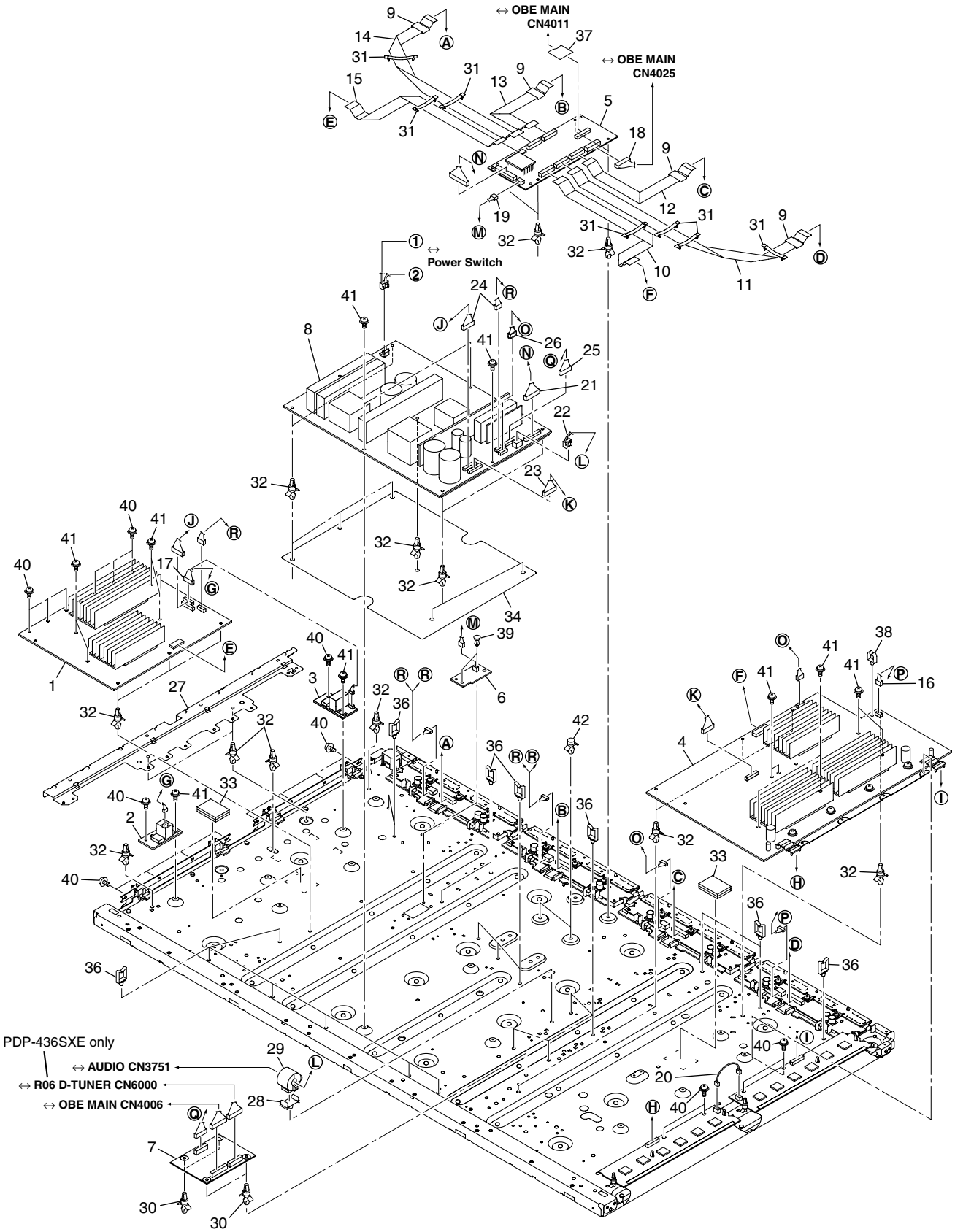
Mark	No.	Description	Part No.
	1	IR Assy	AWW1092
⚠	2	Power Switch (S1)	ASG1092
	3	Power Housing Wire (43)(J103)	ADX3291
⚠	4	Fan Motor 80 x 25L	AXM1052
	5	Floating Rubber 80	AEB1427
	6	Fan Holder	ANG2833
	7	Sub Frame L Assy 436SX	ANA1889
	8	Sub Frame R Assy 436SX	ANA1890
	9	Wire Saddle	AEC1745
	10	Chassis Support	AMR3475
	11	Front Chassis H Assy 436SX	ANA1924
	12	Panel Holder V1 (43)	ANG2773
	13	Panel Holder V2 (43)	ANG2774
	14	Front Chassis VL (436SX)	AMA1018
	15	Front Chassis VR (436SX)	AMA1019
	16	Panel Holder H (43)	ANG2772
	17	3P Housing Wire (J124)	ADX3204
	18	Screw	ABA1341
	19	Screw	TBZ40P080FTB
	20	Screw	AMZ30P060FTB
	21	Screw	APZ30P080FTB
	22	Screw	ABZ30P080FTC
	23	Screw	VBB30P080FNI
	24	Screw	BPZ30P080FTB
	25	Screw	BBZ30P060FTC
	26	Screw	APZ30P100FTB
	27	Waterproof Cushion	AEB1424
	28	Binder	See Contrast table (2)
	29	Insulation Sheet	AED1289
⚠	30	Gasket AV	ANK1817
	31	Re-use Clamp	AEC2083
	32	Ferrite Core	See Contrast table (2)
	33	Ferrite Core Holder	See Contrast table (2)
	34	Cushion	See Contrast table (2)

(2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	28	Binder	Not used	AEC-093	AEC-093
	32	Ferrite Core	ATX1060	Not used	Not used
	33	Ferrite Core Holder	AEC1818	Not used	Not used
	34	Cushion	Not used	Not used	AEB1441

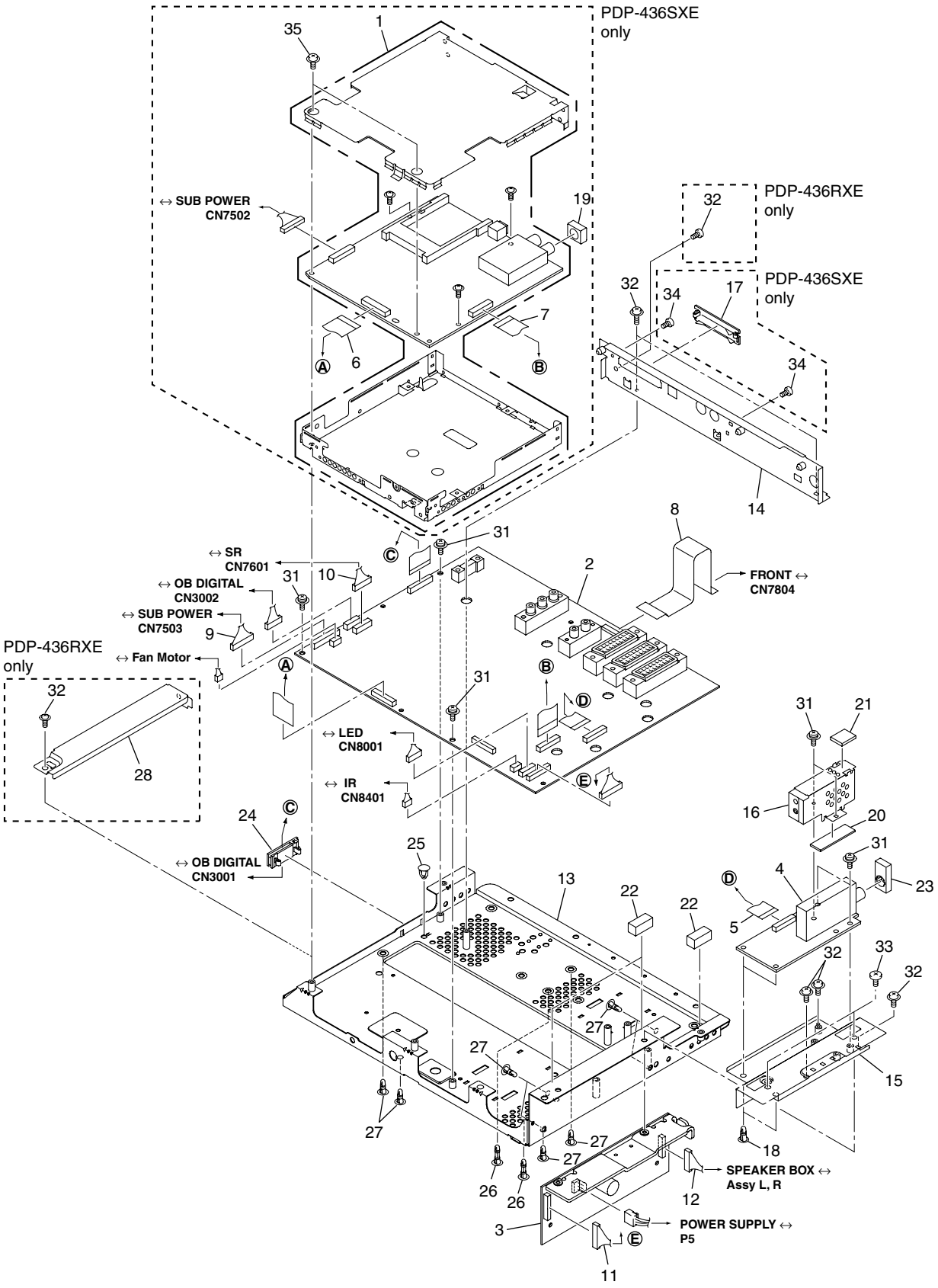
2.5 CHASSIS SECTION (2/2)



CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	43 X DRIVE Assy	AWW1074
	2	SUS CLAMP 1 Assy	AWW1022
	3	SUS CLAMP 2 Assy	AWW1023
	4	43 Y DRIVE Assy	AWV2256
	5	OB DIGITAL Assy	AWV2244
	6	PANEL SENSOR Assy	AWW1094
	7	SUB POWER Assy	AWW1095
⚠	8	POWER SUPPLY Unit	AXY1133
	9	Ferrite Core	ATX1048
	10	Flexible Cable (J201)	ADD1299
	11	Flexible Cable (J202)	ADD1300
	12	Flexible Cable (J203)	ADD1301
	13	Flexible Cable (J204)	ADD1302
	14	Flexible Cable (J205)	ADD1303
	15	Flexible Cable (J206)	ADD1304
	16	4P Housing Wire (J108)	ADX3131
	17	6P Housing Wire (J121)	ADX3201
	18	8P Housing Wire (J128)	ADX3208
	19	3P Housing Wire (J123)	ADX3203
	20	3P Housing Wire (J113)	ADX3136
	21	14P Housing Wire(J122)	ADX3202
	22	3P Housing Wire (J125)	ADX3205
	23	9P Housing Wire (J101)	ADX3124
	24	Housing Wire (J120)	ADX3290
	25	10P Housing Wire (J133)	ADX3214
	26	6P Housing Wire (J107)	ADX3130
	27	Conductive Plate XA	ANG2776
	28	Ferrite Core Holder	AEC1818
	29	Ferrite Core	ATX1044
	30	Circuit Board Spacer	AEC2047
	31	Flat Clamp	AEC1879
	32	PCB Spacer	AEC1941
	33	Drive Silicone Sheet	AEH1095
	34	Power Sheet	AMR3447
	35	•••••	
	36	Wire Saddle	AEC1745
	37	FPC (50P) 180 mm	ADY1102
	38	Mini Clamp	AEC1971
	39	Nyron Rivet	AEC1671
	40	Screw	PMB30P060FTC
	41	Screw	VBB30P080FNI
	42	PCB Support	AEC1938

2.6 AV BLOCK SECTION



(1) AV BLOCK PARTS LIST

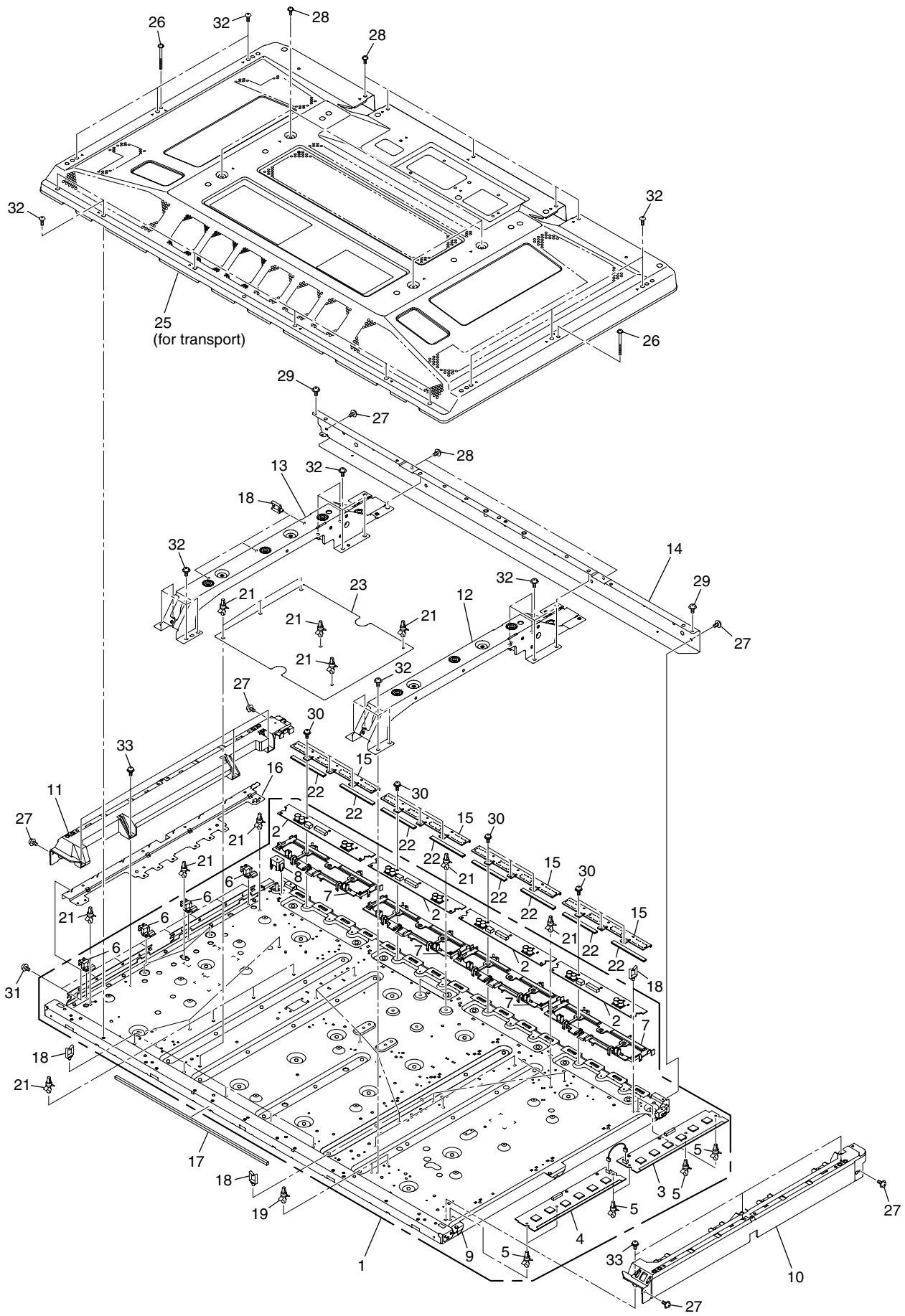
Mark	No.	Description	Part No.
	1	R06 D-TUNER Assy	See Contrast table (2)
	2	OBE MAIN Assy	See Contrast table (2)
	3	AUDIO Assy	AWW1087
	4	TUNER Assy	AWW1089
	5	Flexible Cable (J208)	ADD1340
	6	Flexible Cable (J210)	See Contrast table (2)
	7	Flexible Cable (J211)	See Contrast table (2)
	8	Flexible Cable (J212)	ADD1337
	9	12/16P Housing Wire (J129)	See Contrast table (2)
	10	9P Housing Wire (J130)	ADX3261
	11	13P Housing Wire (J131)	ADX3211
	12	8P Housing Wire (J132)	ADX3212
	13	AV Base Chassis E	ANA1902
	14	Tuner Prop E	AND1194
	15	Frontend Base	ANG2868
	16	Frontend Shield	ANG2935
	17	Rear Cover	See Contrast table (2)
	18	Spacer	AEC1256
⚠	19	Gasket N	See Contrast table (2)
	20	Gasket A	ANK1811
	21	Gasket B	ANK1812
	22	Gasket C	ANK1813
⚠	23	Gasket XE	ANK1818
	24	Clamp	AEC1884
	25	Card Spacer	AEC1957
	26	Locking Card Spacer	AEC1801
	27	Locking Card Spacer	AEC2019
	28	Terminal Support	See Contrast table (2)
	29	•••••	
	30	•••••	
	31	Screw	PMB30P080FNI
	32	Screw	AMZ30P060FTB
	33	Screw	See Contrast table (2)
	34	Screw	See Contrast table (2)
	35	Screw	See Contrast table (2)

(2) CONTRAST TABLE

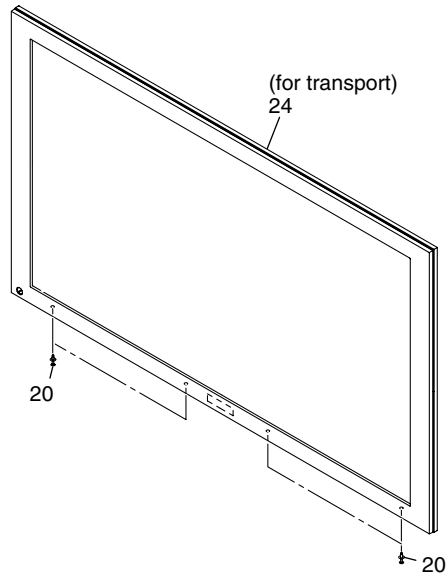
PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	1	R06 D-TUNER Assy	AWE1304	Not used	Not used
	2	OBE MAIN Assy	AWV2238	AWV2239	AWV2239
	6	Flexible Cable (J210)	ADD1335	Not used	Not used
	7	Flexible Cable (J211)	ADD1341	Not used	Not used
	9	12P/16P Housing Wire (J129)	ADX3277	Not used	Not used
	9	16P Housing Wire (J129)	Not used	ADX3260	ADX3260
	17	Rear Cover	AMR3425	Not used	Not used
⚠	19	Gasket N	ANK1776	Not used	Not used
	28	Terminal Support	Not used	ANG2869	ANG2869
	33	Screw	ABA1341	ABA1341	ABA1335
	34	Screw	BBZ30P060FTB	Not used	Not used
	35	Screw	AMZ30P080FTC	Not used	Not used

2.7 PDP SERVICE ASSY 436P (AWU1135)



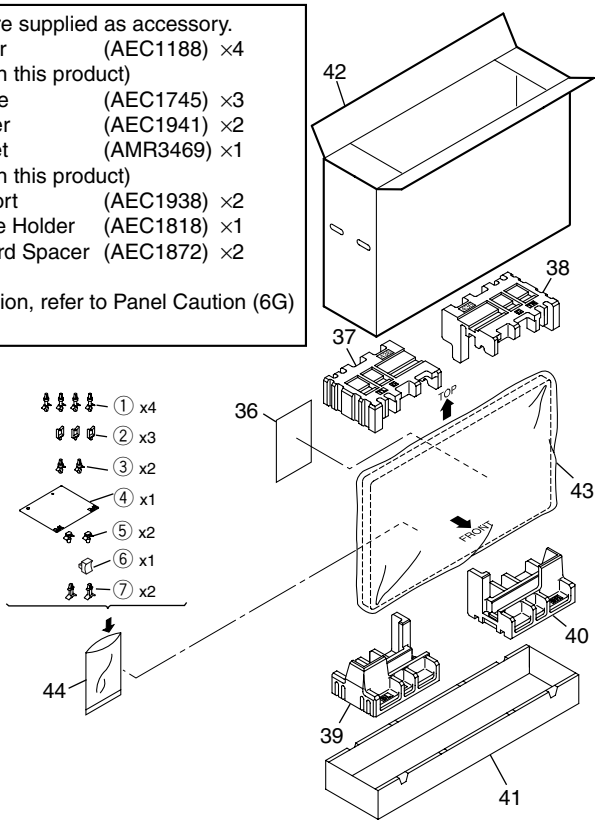
• Front Section



• Packing Section

Some parts are supplied as accessory.
① PCB spacer (AEC1188) ×4
(Not used in this product)
② Wire Saddle (AEC1745) ×3
③ PCB Spacer (AEC1941) ×2
④ Audio Sheet (AMR3469) ×1
(Not used in this product)
⑤ PCB Support (AEC1938) ×2
⑥ Ferrite Core Holder (AEC1818) ×1
⑦ Circuit Board Spacer (AEC1872) ×2

About installation, refer to Panel Caution (6G) (ARM1287).



Note when replacing with the PDP Service Assy 436P

This Assy is supplied with common use product. Because the following components do not use it with this unit, detach it, and please use it.
• Front Chassis H Assy (43)(ANA1884)
• Front Chassis VL (43) (AMA1016)
• Front Chassis VR (43) (AMA1017)
• Sub Frame L Assy (436) (ANA1864)
• Sub Frame R Assy (436) (ANA1865)

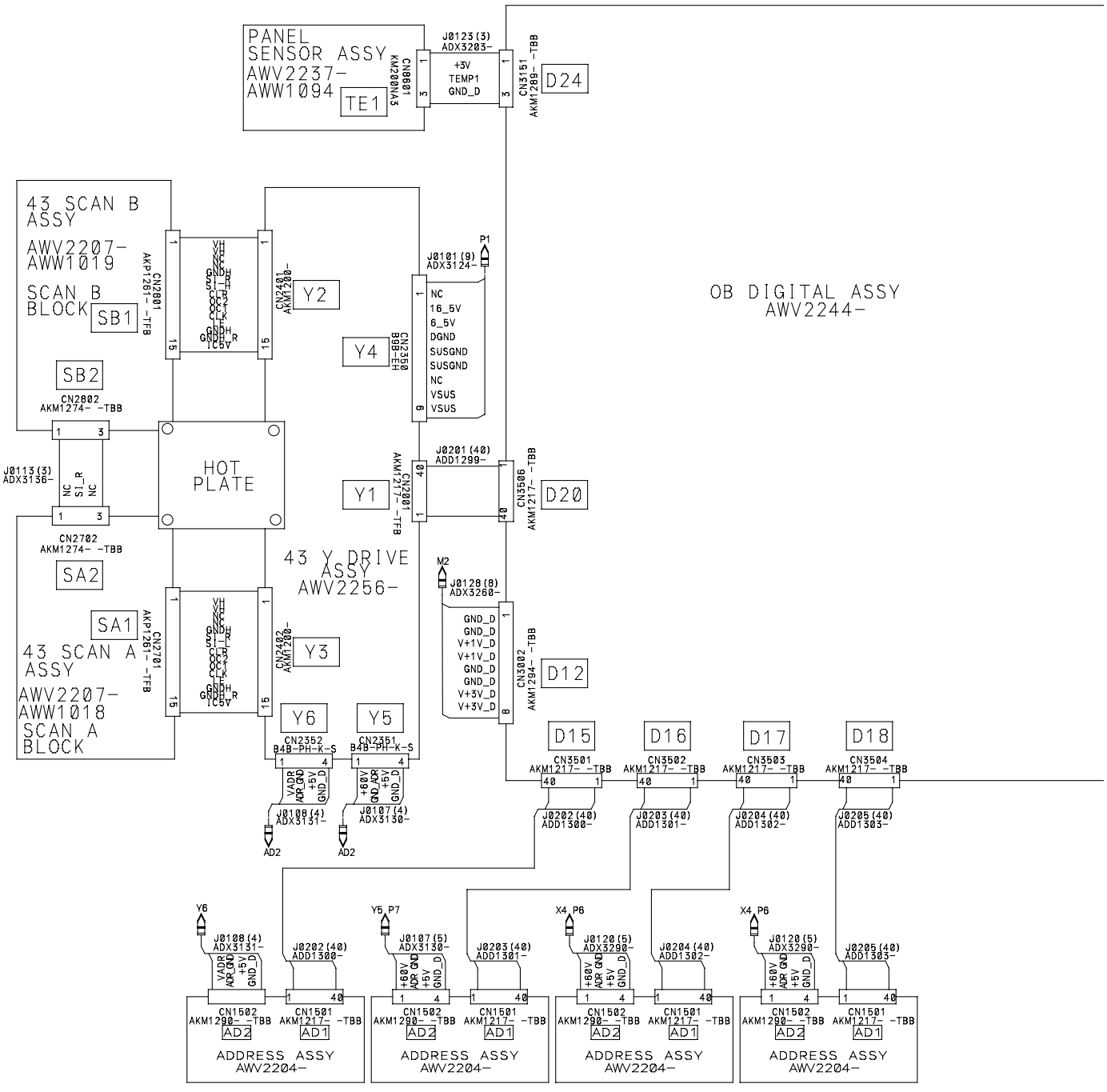
PDP SERVICE ASSY 436P (AWU1135) PARTS LIST

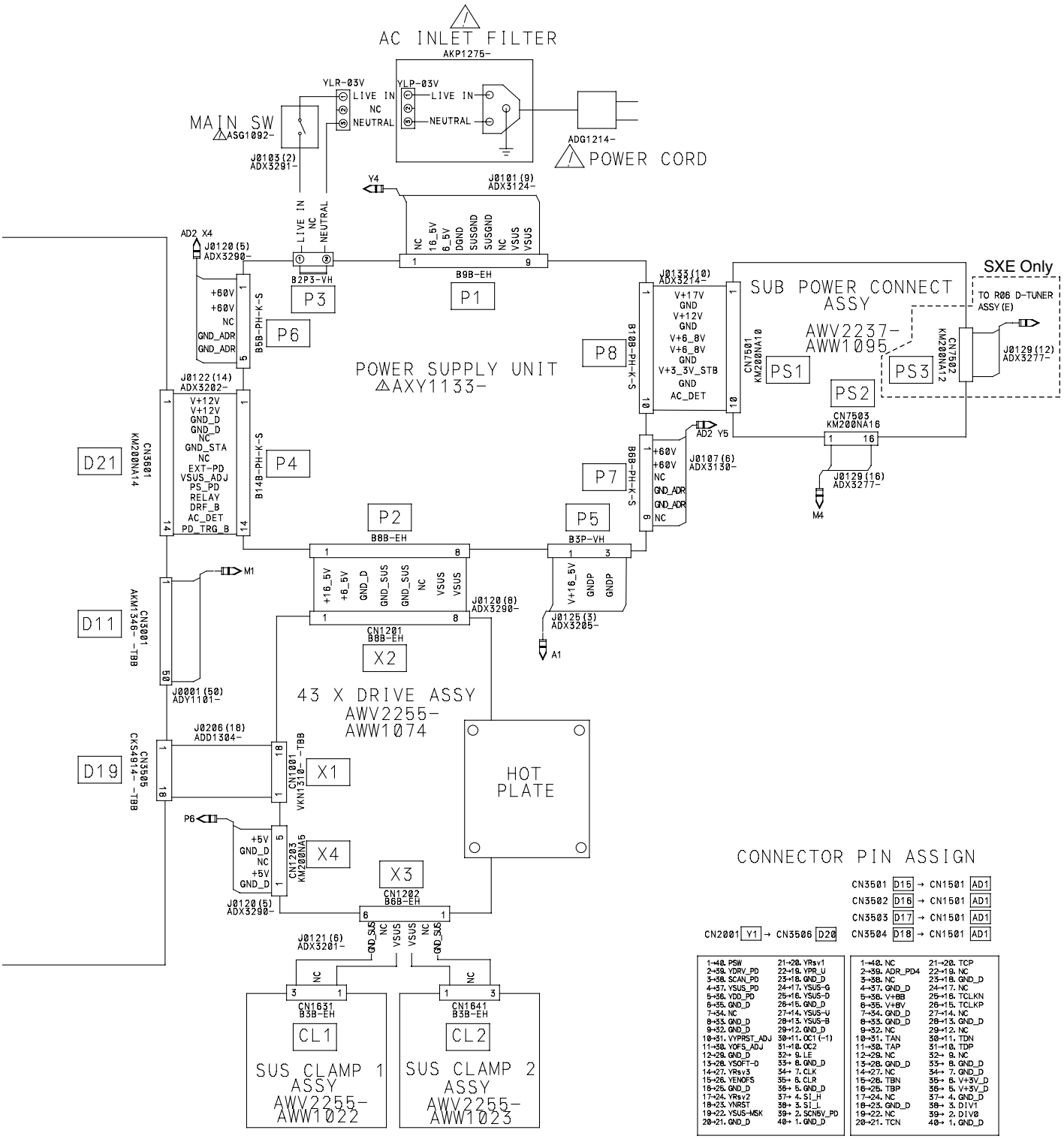
Mark	No.	Description	Part No.
NSP	1	Panel Chassis (436) Assy	AWU1145
NSP	2	43 ADDRESS Assy	AWV2204
NSP	3	43 SCAN A Assy	AWW1018
NSP	4	43 SCAN B Assy	AWW1019
	5	PCB Spacer	AEC1944
	6	Conductive Plate Holder	AMR3446
	7	Adddress Holder Assy (436)	AMR3455
	8	Tube Cover	AMR3445
NSP	9	Chassis Assy (436)	ANA1833
	10	Front Chassis VL (43)	AMA1016
	11	Front Chassis VR (43)	AMA1017
	12	Sub Frame L Assy (436)	ANA1864
	13	Sub Frame R Assy (436)	ANA1865
	14	Front Chassis H Assy (43)	ANA1884
	15	Address Heatsink (436)	ANH1641
	16	Conductive plate XA	ANG2776
	17	Cushion	AEB1424
	18	Wire Saddle	AEC1745
	19	Circuit Board Spacer	AEC1872
	20	Screw Rivet	AEC1877
	21	PCB Spacer	AEC1941
	22	Address Silicone A	AEH1093
	23	Power Sheet	AMR3447
NSP	24	Front Case Assy 436 service (for transport)	AMB2895
	25	Rear Case (436) (for transport)	ANE1640
	26	Screw (3x40P)	ABA1332
	27	Screw	ABZ30P080FTC
	28	Screw	AMZ30P060FTB
	29	Screw	APZ30P080FTB
	30	Screw	BBB30P120FNI
	31	Screw	PMB30P060FTC
	32	Screw	TBZ40P080FTB
	33	Screw	VBB30P080FNI
	34	•••••	
	35	•••••	
NSP	36	Panel Caution (6G)	ARM1287
	37	Pad (43T-L)	AHA2431
	38	Pad (43T-R)	AHA2432
	39	Pad (43B-L)	AHA2433
	40	Pad (43B-R)	AHA2434
	41	Under Carton	AHD3346
NSP	42	Upper Carton (436 S.V.C)	AHD3436
	43	Sheet	AHG1331
	44	Polyethylene Bag S	AHG1338

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM (1/2)

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.





CONNECTOR PIN ASSIGN

CN3501 D15 → CN1501 AD1
CN3502 D16 → CN1501 AD1
CN3503 D17 → CN1501 AD1
CN3504 D18 → CN1501 AD1
CN2001 Y1 → CN3506 D20

1→48. PSW	21→20. YRsv1
2→39. VDRV_PD	22→19. YPR_U
3→38. SCAN_PD	23→18. GND_D
4→37. YSUS_PD	24→17. YSUS-G
5→36. VDD_PD	25→16. YSUS-D
6→35. GND_D	26→15. GND_D
7→34. NC	27→14. YSUS-U
8→33. GND_D	28→13. YSUS-B
9→32. GND_D	29→12. GND_D
10→31. VYPRST_ADJ	30→11. OC1 (-1)
11→30. YOFS_ADJ	31→10. OC2
12→29. GND_D	32→ 9. LE
13→28. YSOFT-D	33→ 8. GND_D
14→27. YRsv3	34→ 7. CLK
15→26. YENOFS	35→ 6. CLR
16→25. GND_D	36→ 5. GND_D
17→24. YRsv2	37→ 4. SI_H
18→23. YNRST	38→ 3. SI_L
19→22. YSUS-MSK	39→ 2. SCN5V_PD
20→21. GND_D	40→ 1. GND_D

1→48. NC	21→20. TCP
2→39. ADR_PD4	22→19. NC
3→38. NC	23→18. GND_D
4→37. GND_D	24→17. NC
5→36. V+BB	25→16. TCLKN
6→35. V+BV	26→15. TCLKP
7→34. GND_D	27→14. NC
8→33. GND_D	28→13. GND_D
9→32. NC	29→12. NC
10→31. TAN	30→11. TDN
11→30. TAP	31→10. TDP
12→29. NC	32→ 9. NC
13→28. GND_D	33→ 8. GND_D
14→27. NC	34→ 7. GND_D
15→26. TBN	35→ 6. V+3V_D
16→25. TBP	36→ 5. V+3V_D
17→24. NC	37→ 4. GND_D
18→23. GND_D	38→ 3. DIV1
19→22. NC	39→ 2. DIV0
20→21. TCN	40→ 1. GND_D

(SXE Only)
CN7502 PS3 → CN6000

1. V+35V	
2. GND	
3. V+17V	
4. GND	
5. V+12V	
6. GND	
7. V+6_8V	
8. V+5V_ST	
9. V+5_1V	
10. V+5_1V	
11. GND	
12. V+3_3V	

CN3505 D19 →CN1001 X1

1→18. PSW	
2→17. XSUS_PD	
3→16. XDD_PD	
4→15. XDRV_PD	
5→14. GND_D	
6→13. XRsv1	
7→12. XSUS-MSK	
8→11. GND_D	
9→10. XNR-D	
10→ 9. GND_D	
11→ 8. XSUS-G	
12→ 7. GND_D	
13→ 6. XSUS-D	
14→ 5. GND_D	
15→ 4. XSUS-U	
16→ 3. GND_D	
17→ 2. XSUS-B	
18→ 1. GND_D	

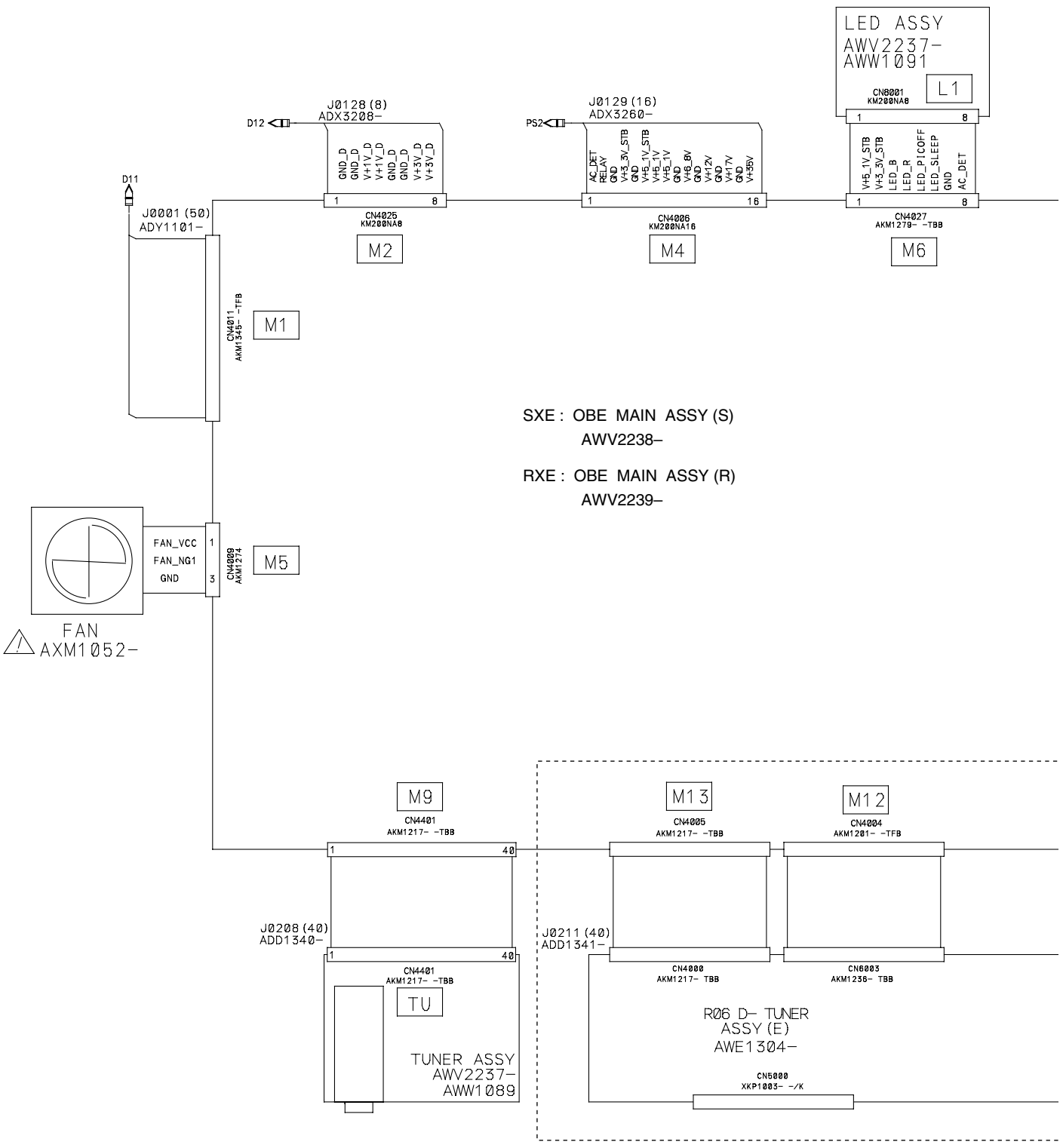
CN7503 PS2 → CN4006 M4

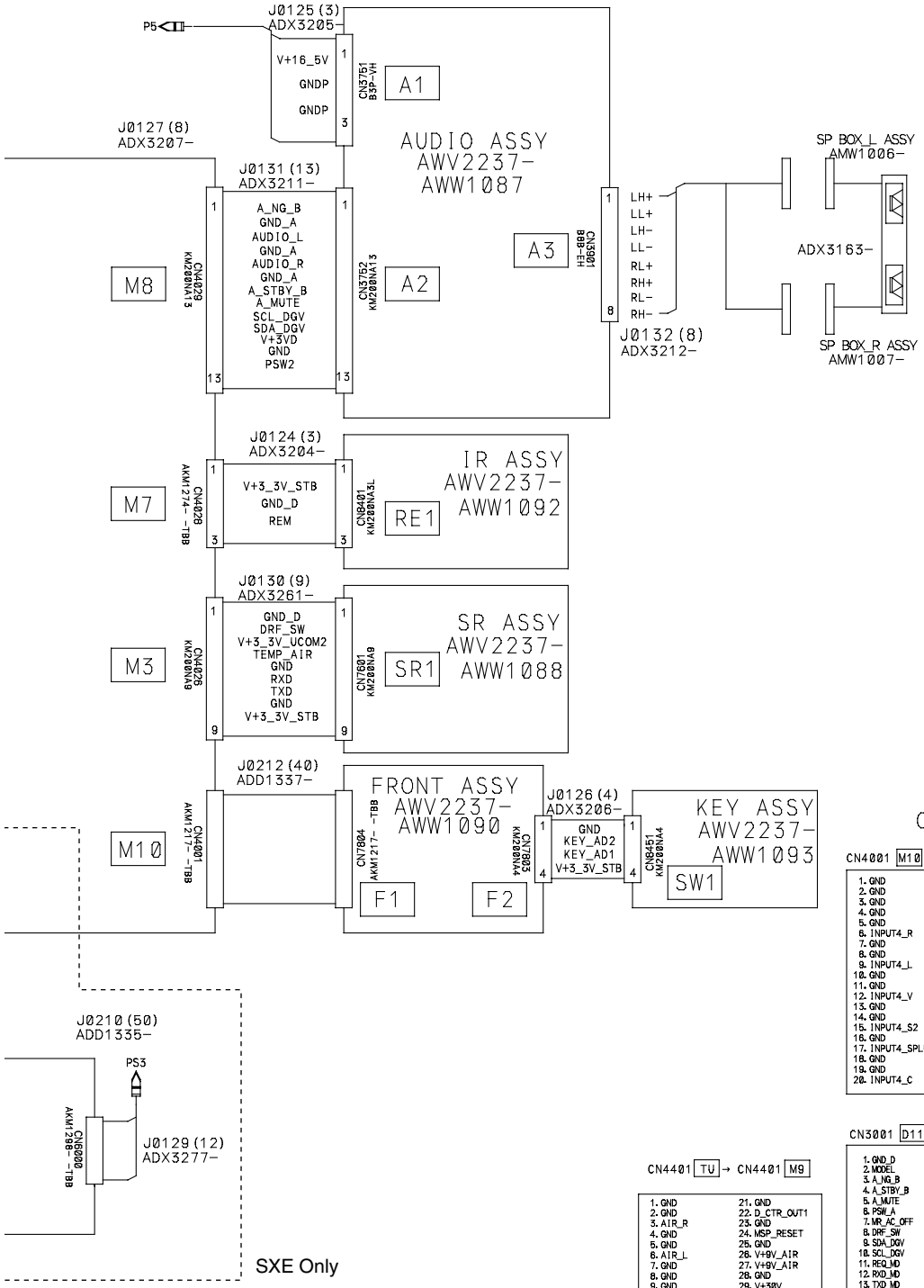
1. AC_DET	
2. NC	
3. GND	
4. V+3_3V_STB	
5. GND	
6. V+5V_STB	
7. V+5_1V	
8. V+5_1V	
9. GND	
10. V+6_8V	
11. GND	
12. V+12V	
13. GND	
14. V+17V	
15. GND	
16. V+35V	

CN3001 D11 →CN4011 M1

1. GND_D	18. DE	35. GA7
2. MODEL	19. GND_D	36. GA6
3. A_MG_B	20. CLK	37. GA5
4. A_STBY_B	21. GND_D	38. GA4
5. A_MUTE	22. V+3V_UCOM2	39. GA3
6. PSW_A	23. GND_D	40. GA2
7. MR_AC_OFF	24. RA9	41. GND_D
8. DRF_SW	25. RA8	42. BA8
9. SDA_DGV	26. RA7	43. BA8
10. SLC_DGV	27. RA6	44. BA7
11. REQ_MD	28. RA5	45. BA6
12. RXD_MD	29. RA4	46. BA5
13. TXD_MD	30. RA3	47. BA4
14. VIS	31. RA2	48. BA3
15. YHEATER	32. GND_D	49. BA2
16. VD	33. GA9	50. GND_D
17. HD	34. GA8	

3.2 OVERALL CONNECTION DIAGRAM (2/2)





CONNECTOR PIN ASSIGN

CN4001 M10 → CN7804 F1

1. GND	21. GND
2. GND	22. GND
3. GND	23. INPUT4_Y
4. GND	24. GND
5. GND	25. GND
6. INPUT4_R	26. GND
7. GND	27. GND
8. GND	28. GND
9. INPUT4_L	29. GND
10. GND	30. GND
11. GND	31. GND
12. INPUT4_V	32. MODE
13. GND	33. GND
14. GND	34. GND
15. INPUT4_S2	35. GND
16. GND	36. GND
17. INPUT4_SPLUG	37. KEY_AD2
18. GND	38. KEY_AD1
19. GND	39. V+3_3V_STB
20. INPUT4_C	40. GND

(SXE Only)

CN4000 → CN4005 M13

1→40. GND	21→20. GND
2→39. GND	22→19. GND
3→38. GND	23→18. GND
4→37. GND	24→17. GND
5→36. GND	25→16. GND
6→35. GND	26→15. GND
7→34. DT_SP_R	27→14. NC
8→33. GND	28→13. GND
9→32. DT_SP_L	29→12. GND
10→31. GND	30→11. NC
11→30. OPT_R	31→10. GND
12→29. GND	32→ 9. GND
13→28. OPT_L	33→ 8. NC
14→27. GND	34→ 7. GND
15→26. DT_MON_C	35→ 6. GND
16→25. GND	36→ 5. ANT_POW_EU
17→24. GND	37→ 4. POW_DET
18→23. DT_MON_Y	38→ 3. RST_DT
19→22. GND	39→ 2. DT_DET
20→21. GND	40→ 1. GND

CN4401 TU → CN4401 M9

1. GND	21. GND
2. GND	22. D_CTR_OUT1
3. AIR_R	23. GND
4. GND	24. MSP_RESET
5. GND	25. GND
6. AIR_L	26. V+8V_AIR
7. GND	27. V+8V_AIR
8. GND	28. GND
9. GND	29. V+30V
10. SCL_AV	30. V+30V
11. SDA_AV	31. GND
12. GND	32. GND
13. GND	33. SCL_AIR
14. V+5V_AIR	34. SDA_AIR
15. V+5V_AIR	35. GND
16. GND	36. IN5DET
17. GND	37. IN2DET
18. A_TUNER_V	38. IN2DET_B
19. GND	39. LINK_IO
20. V+3_3V_UCOM2	40. GND

CN3001 D11 → CN4011 M1

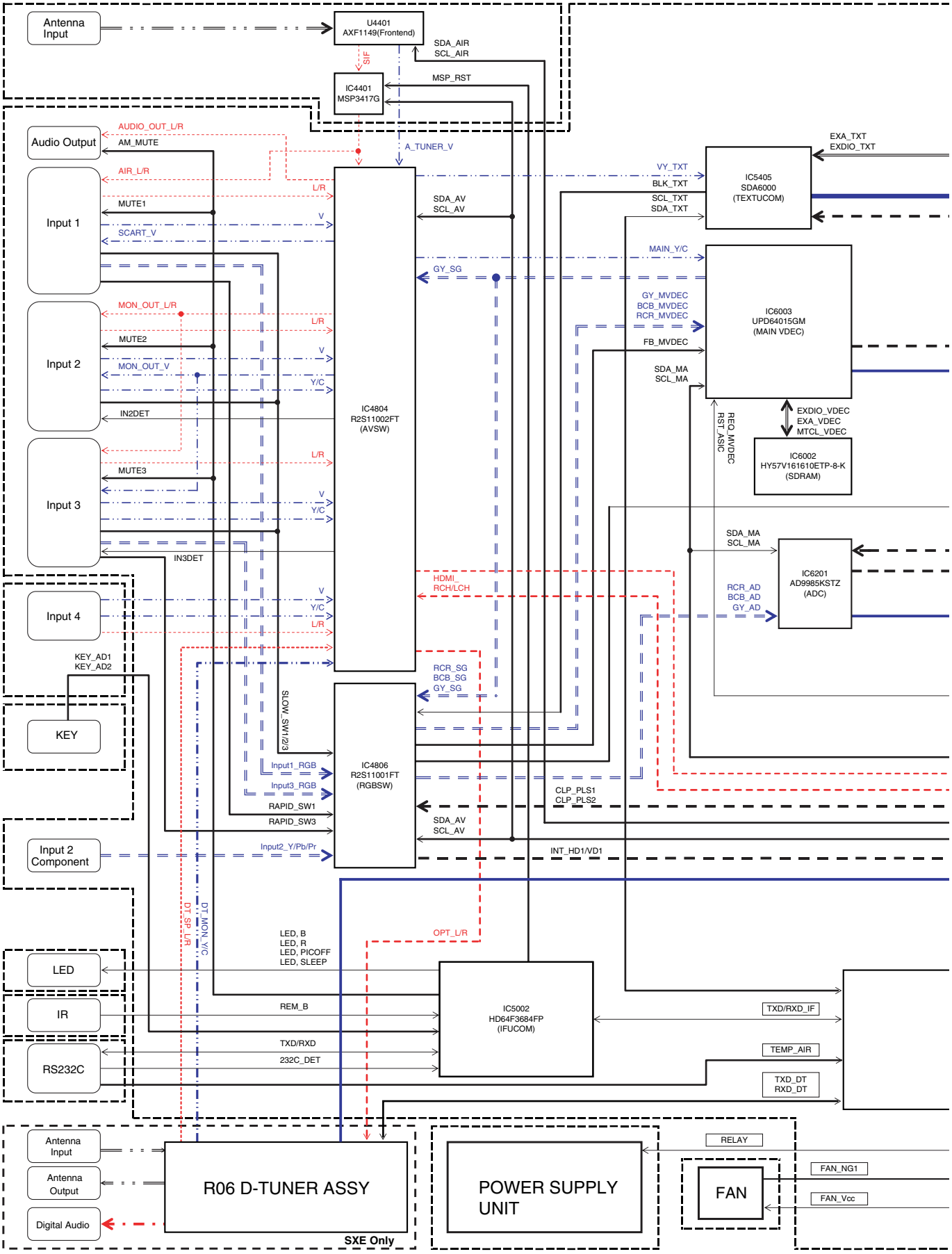
1. GND_D	26. RA7
2. MODEL	27. RA8
3. A_NG_B	28. RA5
4. A_STBY_B	29. RA4
5. A_MUTE	30. RA3
6. PSW_A	31. RA2
7. MR_AC_OFF	32. GND_D
8. DRF_SW	33. GA9
9. SDA_DGV	34. GA8
10. SCL_DGV	35. GA7
11. REQ_MD	36. GA6
12. RXD_MD	37. GA5
13. TXD_MD	38. GA4
14. VIS	39. GA3
15. THEATER	40. GA2
16. VD	41. GND_D
17. HD	42. BA9
18. DE	43. BA8
19. GND_D	44. BA7
20. CLK	45. BA6
21. GND_D	46. BA5
22. V+5V_UCOM2	47. BA4
23. GND_D	48. BA3
24. RA9	49. BA2
25. RA8	50. GND_D

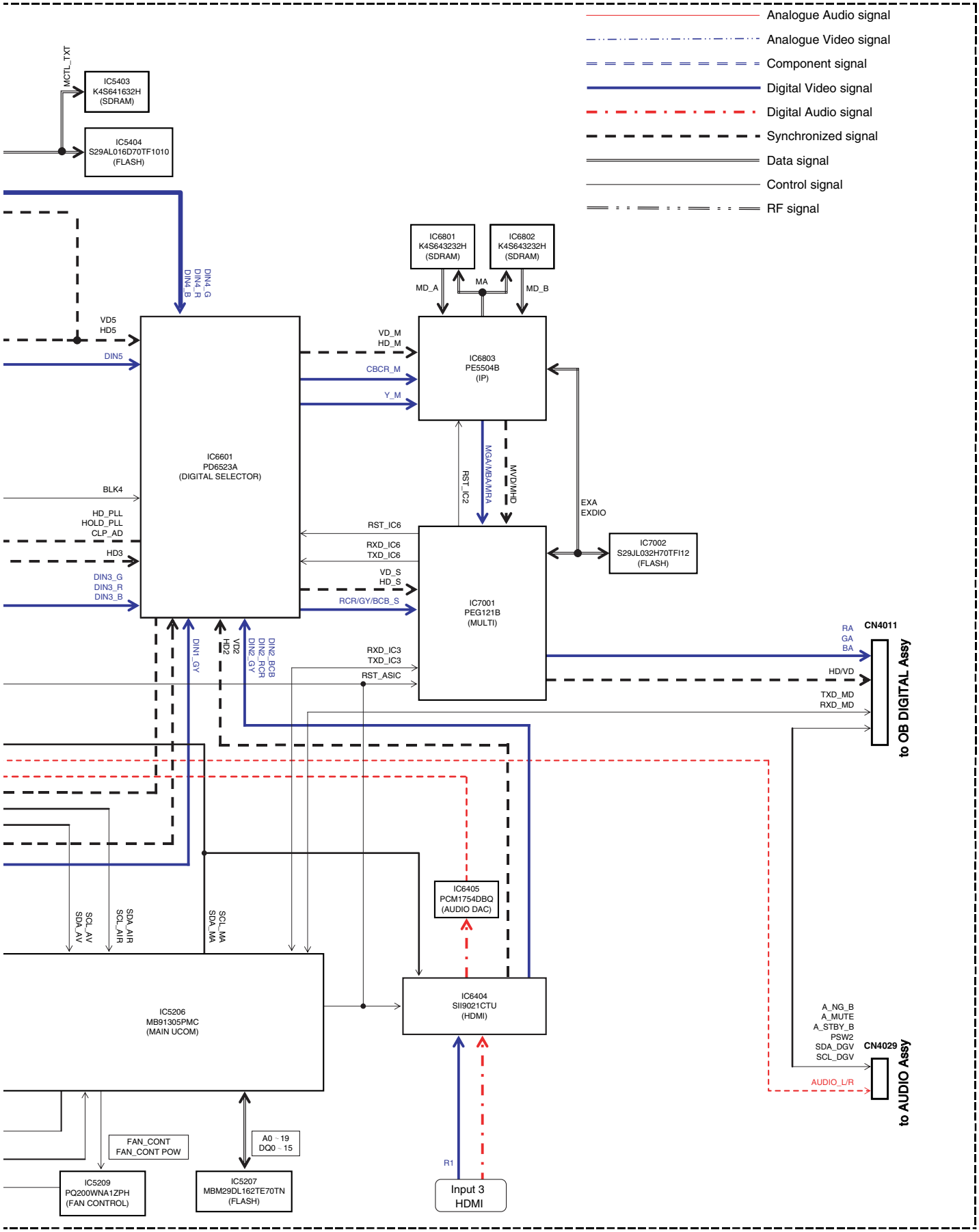
(SXE Only)

CN4004 M12 → CN6003

1. GND	26. GND
2. TXD_DT	27. GND
3. RXD_DT	28. GND
4. GND	29. GND
5. DT_FNC	30. GND
6. GND	31. GND
7. CLK_DT	32. GND
8. GND	33. GND
9. Y7_DT	34. GND
10. Y6_DT	35. GND
11. GND	36. GND
12. Y5_DT	37. GND
13. Y4_DT	38. GND
14. GND	39. GND
15. Y3_DT	40. GND
16. Y2_DT	41. GND
17. GND	42. GND
18. Y1_DT	43. GND
19. Y0_DT	44. GND
20. GND	45. DE_DT
21. CB7_DT	46. GND
22. CB6_DT	47. VD_DT
23. GND	48. GND
24. GND	49. HD_DT
25. GND	50. GND

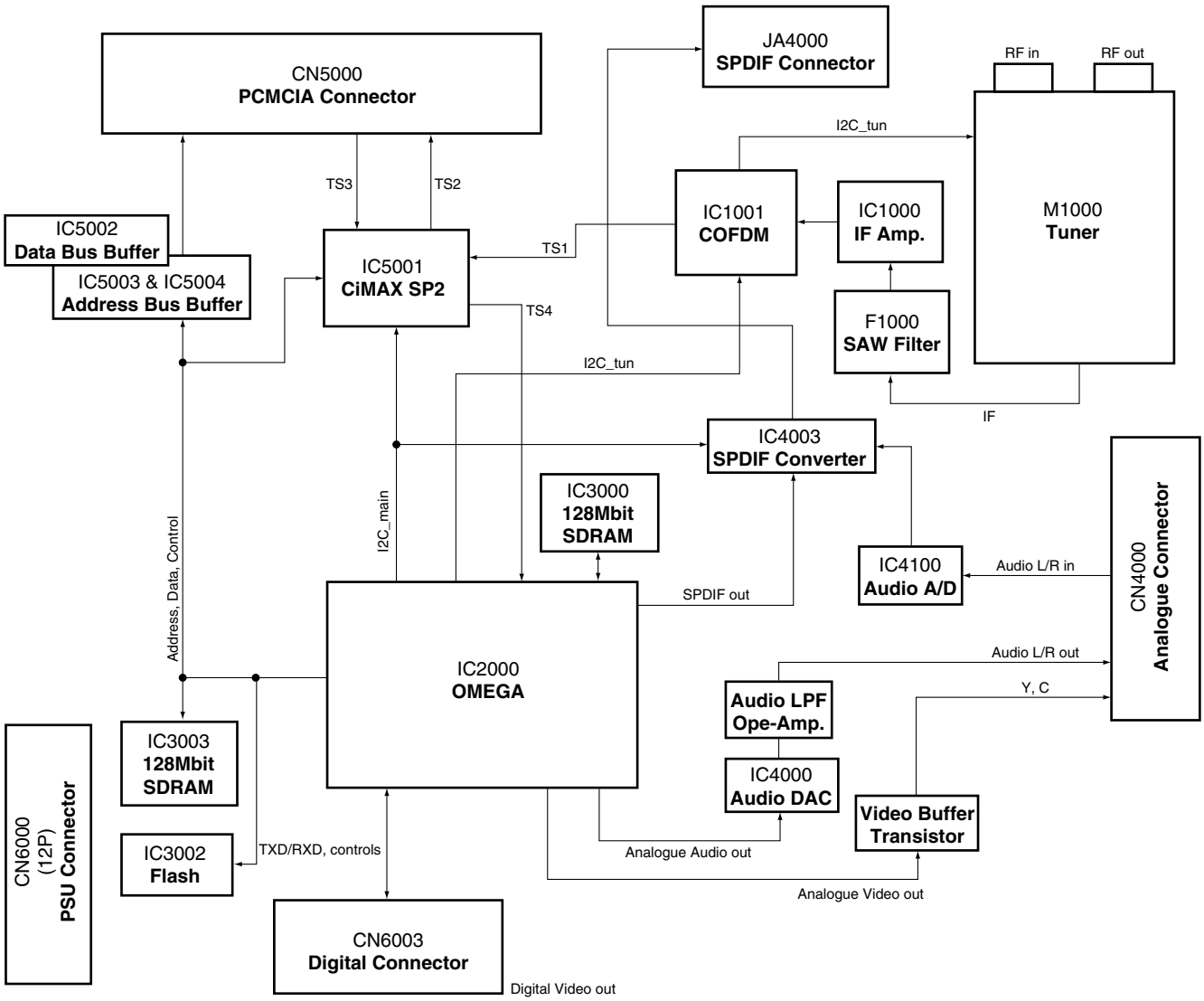
3.3 SIGNAL BLOCK DIAGRAM



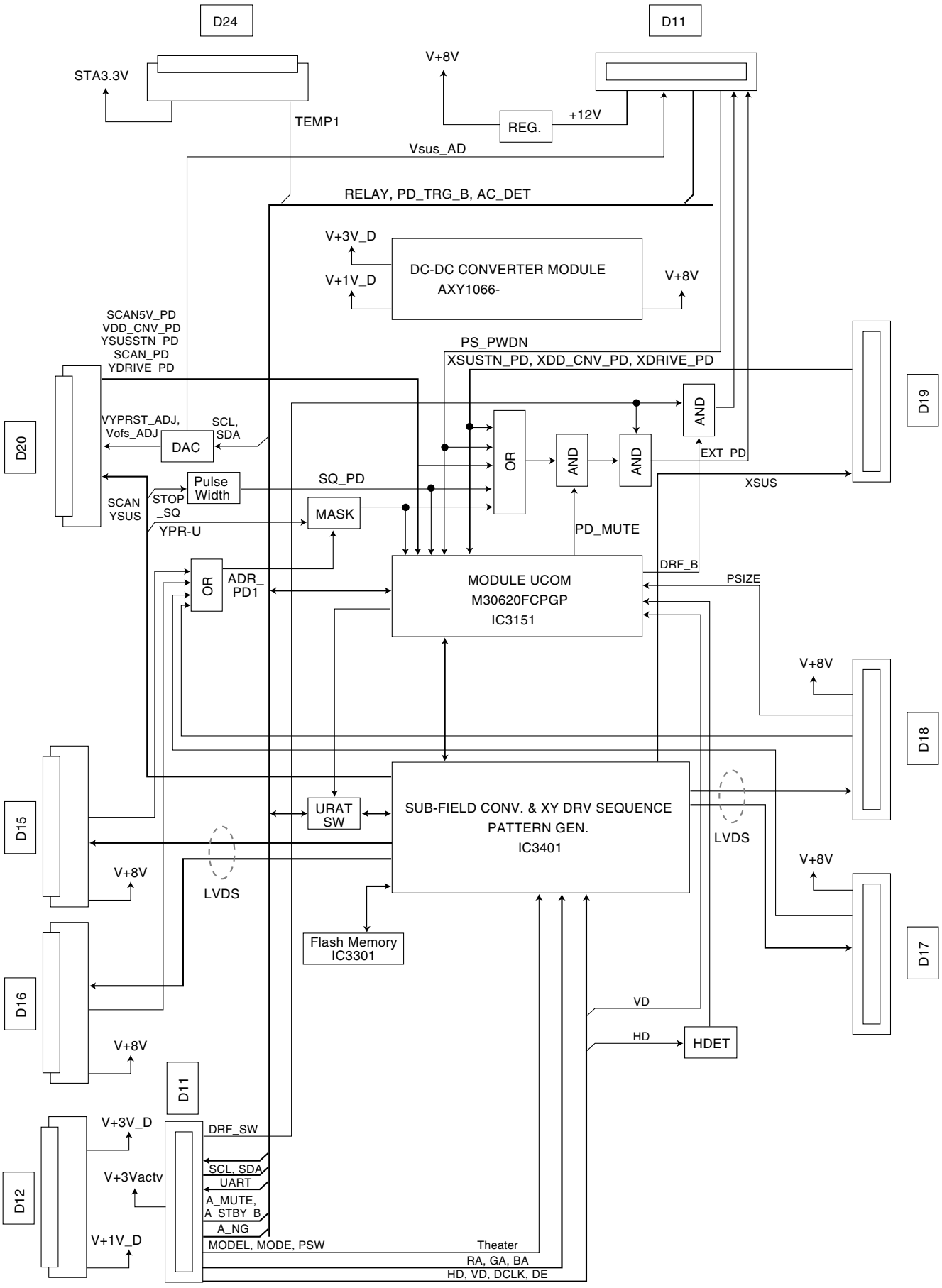

Analogue Audio signal
Analogue Video signal
Component signal
Digital Video signal
Digital Audio signal
Synchronized signal
Data signal
Control signal
RF signal
MCTL_TXT
IC5403
K4S641632H
(SDRAM)
IC5404
S29AL016D70TF1010
(FLASH)
IC6801
K4S643232H
(SDRAM)
IC6802
K4S643232H
(SDRAM)
MD_A
MA
MD_B
DIN4_G
DIN4_R
DIN4_B
VD5
HD5
DIN5
VD_M
HD_M
CBCR_M
Y_M
IC6803
PE5504B
(IP)
IC6601
PD6523A
(DIGITAL SELECTOR)
RST_IC2
MGA/MBA/MRA
MVD/MHD
EXA
EXDIO
IC7002
S29JL032H70TFI12
(FLASH)
BLK4
HD_PLL
HOLD_PLL
CLP_AD
HD3
DIN3_G
DIN3_R
DIN3_B
RST_IC6
RXD_IC6
TXD_IC6
VD_S
HD_S
RCR/GY/BCB_S
IC7001
PEG121B
(MULTI)
RA
GA
BA
HD/VD
TXD_MD
RXD_MD
CN4011
to OB DIGITAL Assy
DIN1_GY
HD2
VD2
DIN2_BCB
DIN2_RCR
DIN2_GY
RXD_IC3
TXD_IC3
RST_ASIC
IC6405
PCM1754DBQ
(AUDIO DAC)
SCL_AV
SDA_AV
SDA_AIR
SCL_AIR
SCL_MA
SDA_MA
IC6404
SII9021CTU
(HDMI)
IC5206
MB91305PMC
(MAIN UCOM)
A_NG_B
A_MUTE
A_STBY_B
PSW2
SDA_DGV
SCL_DGV
CN4029
AUDIO_L/R
to AUDIO Assy
FAN_CONT
FAN_CONT POW
A0 ~ 19
DQ0 ~ 15
R1
IC5209
PQ200WNA1ZPH
(FAN CONTROL)
IC5207
MBM29DL162TE70TN
(FLASH)
Input 3
HDMI

3.4 R06 D-TUNER ASSY

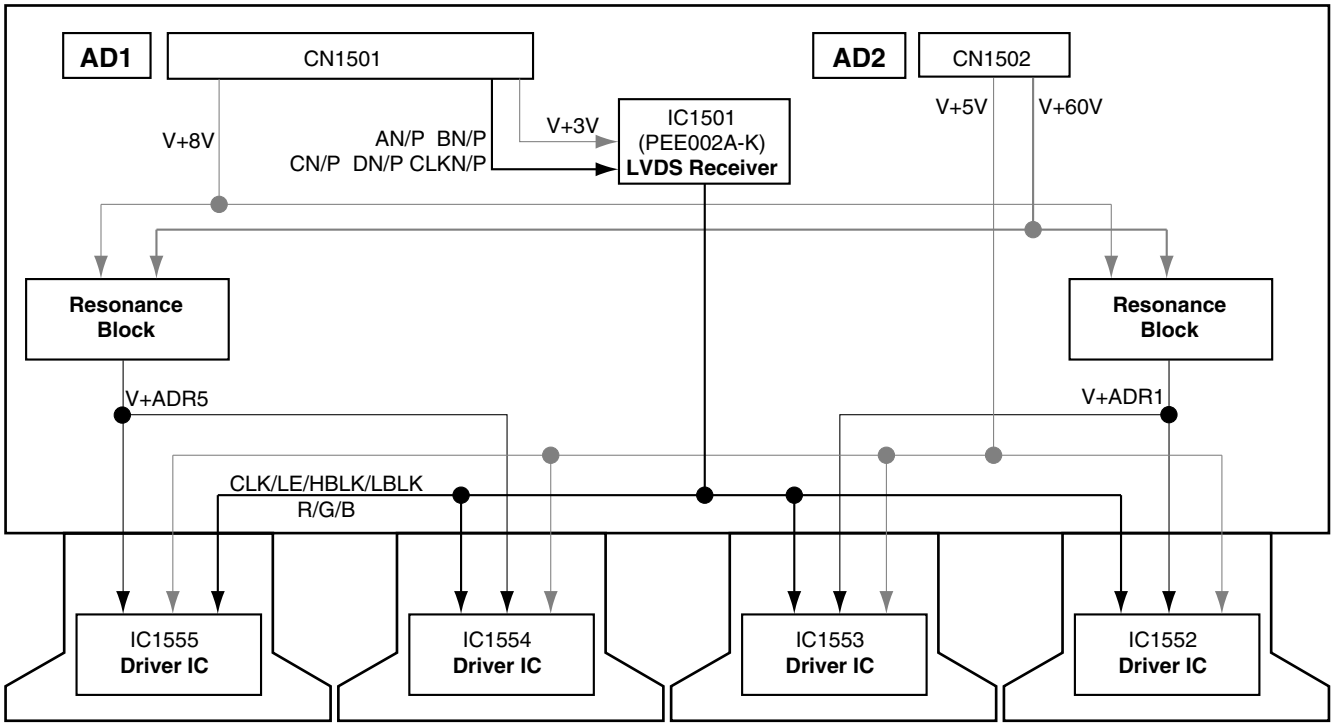
R06 D-TUNER ASSY



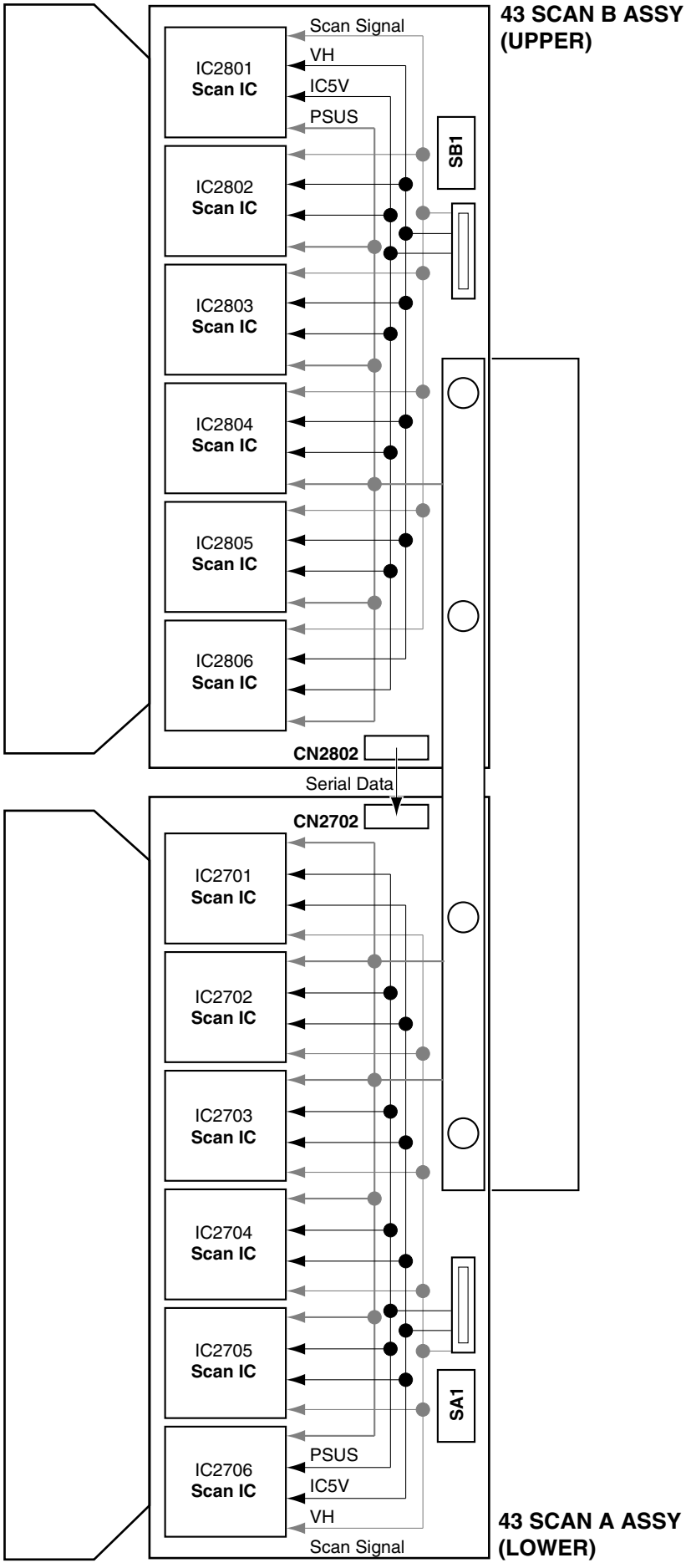
3.5 OB DIGITAL ASSY



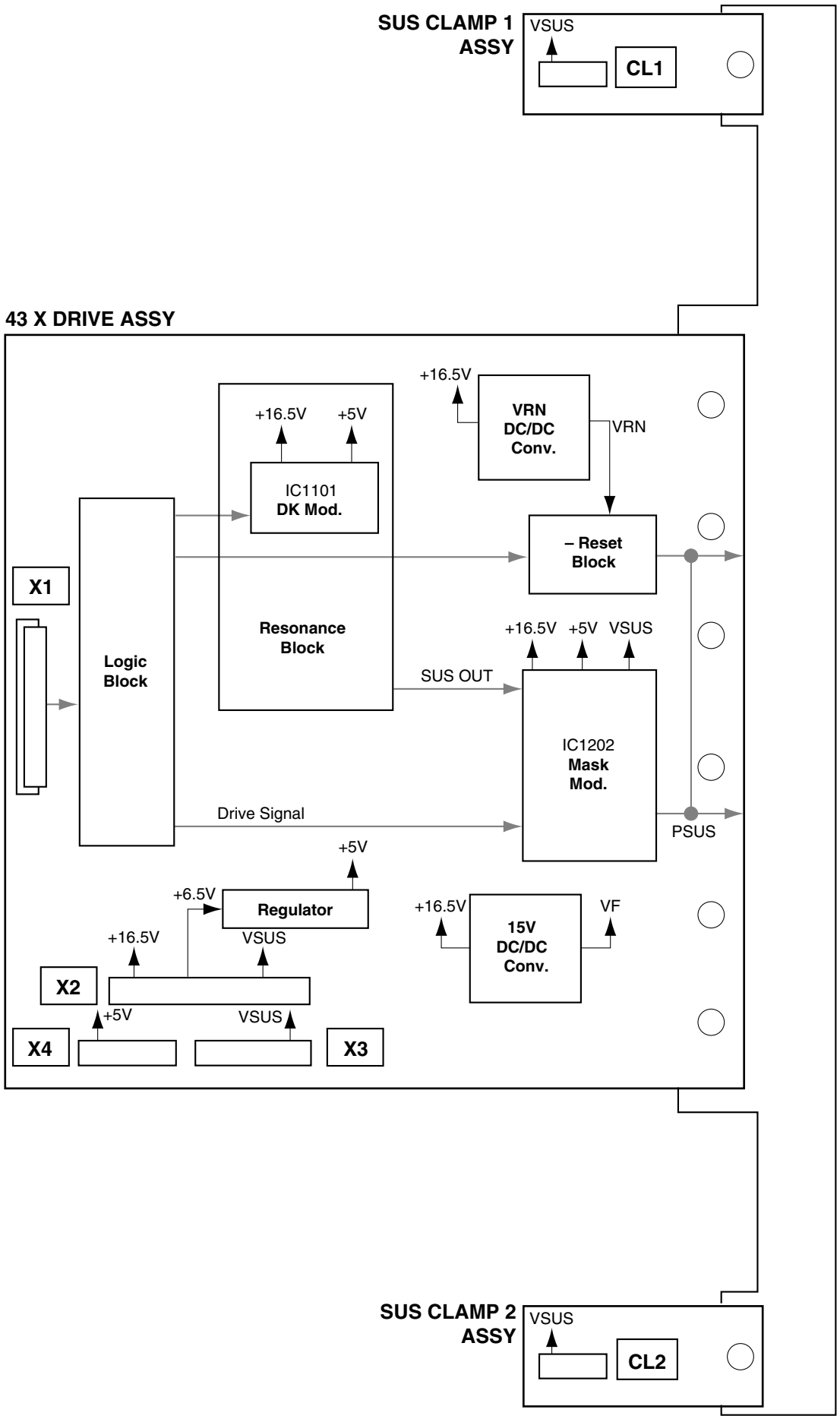
3.6 43 ADDRESS ASSY



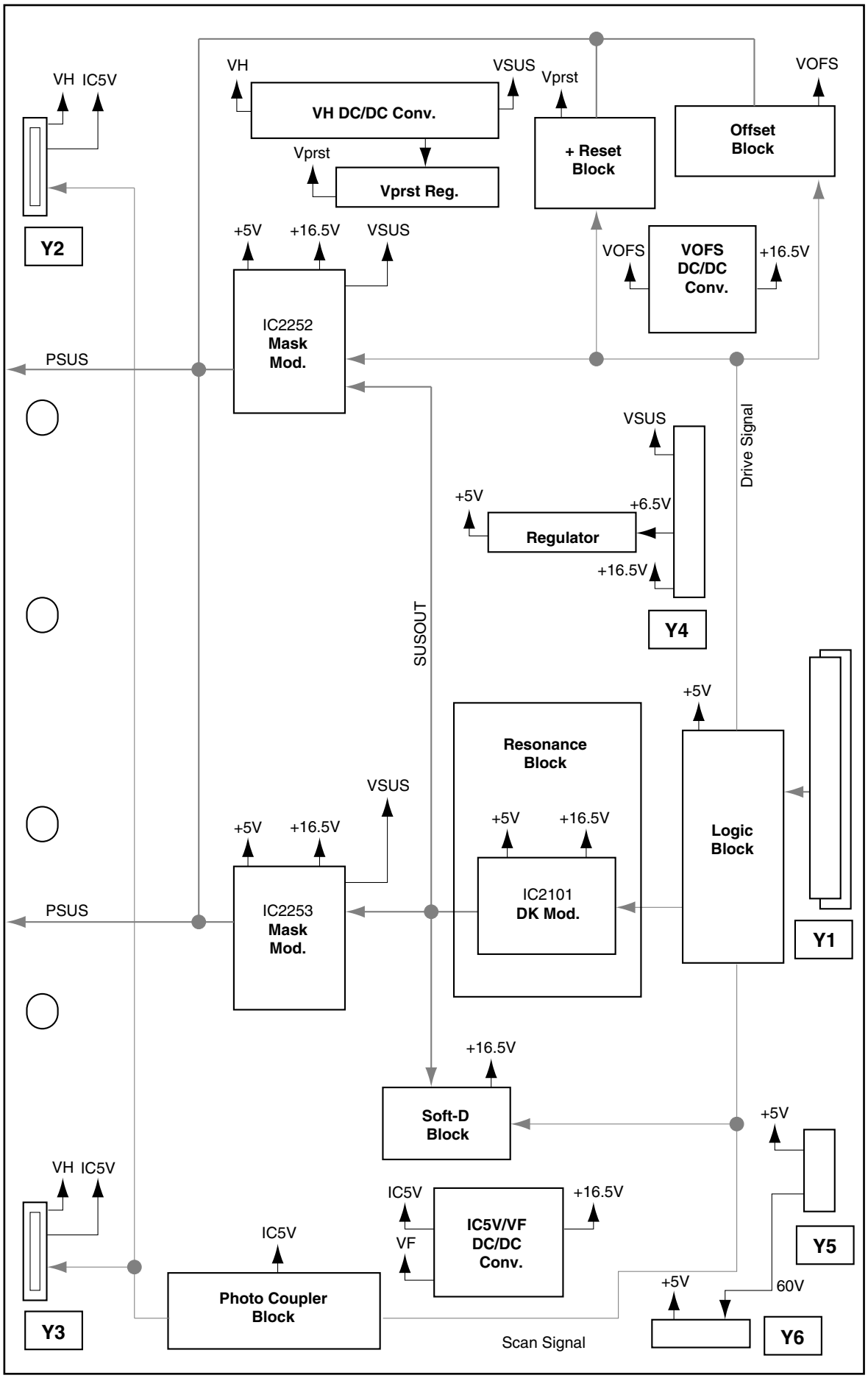
3.7 43 SCAN A and B ASSYS



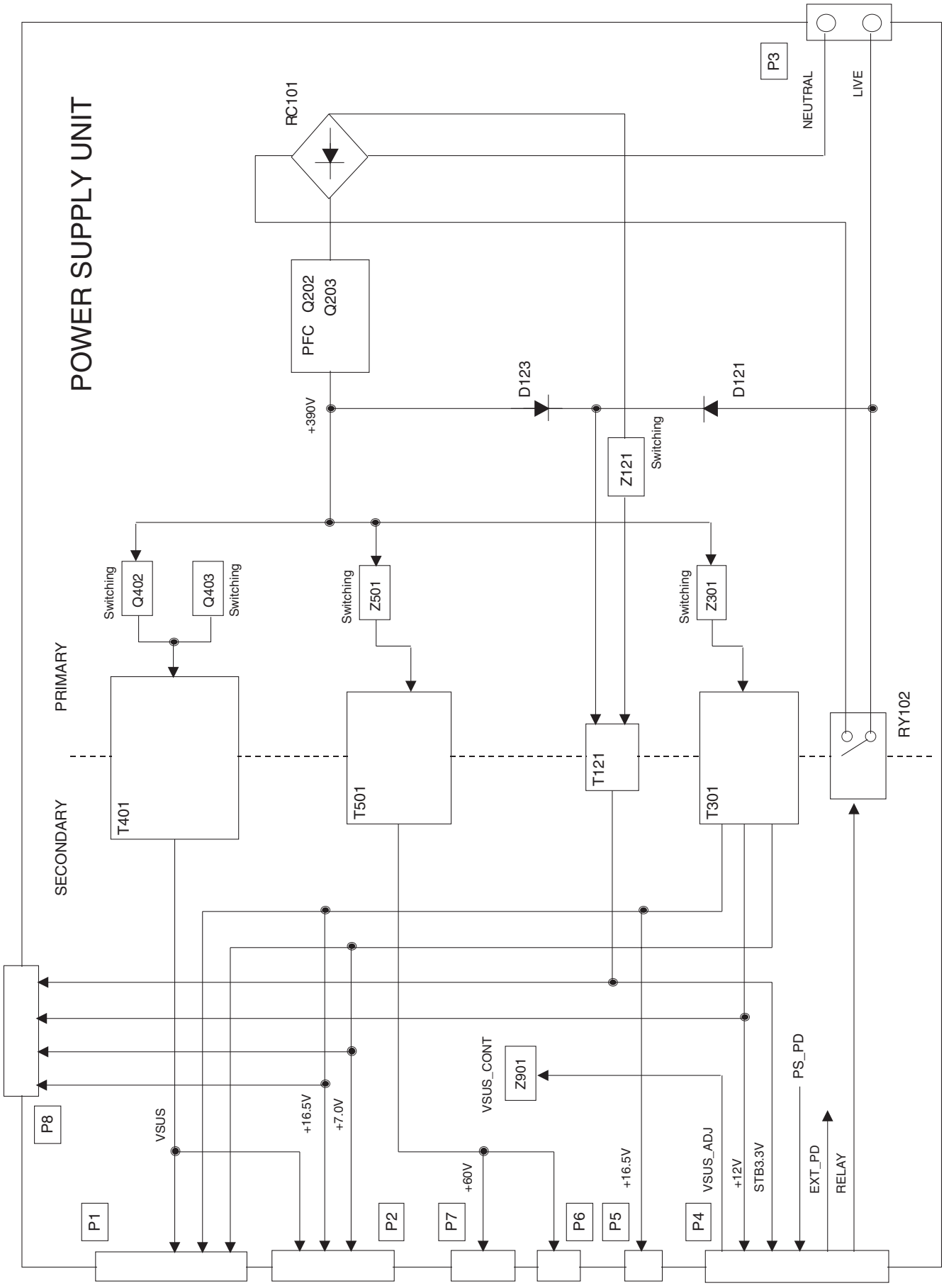
3.8 43 X DRIVE, SUS CLAMP 1 and SUS CLAMP 2 ASSYS



3.9 43 Y DRIVE ASSY



3.10 POWER SUPPLY UNIT



3.11 VOLTAGES

OBE MAIN ASSY — FRONT ASSY

CN4001(AKM1217)		Voltage (V)	CN7804(AKM1217)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	GND	0	GND	3
4	GND	0	GND	4
5	GND	0	GND	5
6	INPUT4_R	4.5	INPUT4_R	6
7	GND	0	GND	7
8	GND	0	GND	8
9	INPUT4_L	4.5	INPUT4_L	9
10	GND	0	GND	10
11	GND	0	GND	11
12	INPUT4_V	2.5	INPUT4_V	12
13	GND	0	GND	13
14	GND	0	GND	14
15	INPUT4_S2	0	INPUT4_S2	15
16	GND	0	GND	16
17	INPUT4_SPLUG	5	INPUT4_SPLUG	17
18	GND	0	GND	18
19	GND	0	GND	19
20	INPUT4_C	0	INPUT4_C	20
21	GND	0	GND	21
22	GND	0	GND	22
23	INPUT4_Y	2.5	INPUT4_Y	23
24	GND	0	GND	24
25	GND	0	GND	25
26	GND	0	GND	26
27	GND	0	GND	27
28	GND	0	GND	28
29	GND	0	GND	29
30	GND	0	GND	30
31	GND	0	GND	31
32	MODE	0	MODE	32
33	GND	0	GND	33
34	GND	0	GND	34
35	GND	0	GND	35
36	GND	0	GND	36
37	KEY_AD2	3.4	KEY_AD2	37
38	KEY_AD1	3.4	KEY_AD1	38
39	V+3_3V_STB	3.4	V+3_3V_STB	39
40	GND	0	GND	40

OBE MAIN ASSY — IR ASSY

CN4028(AKM1274-)		Voltage (V)	CN8401(KM200NA3L)	
No.	Name		Name	No.
1	V+3_3V_STB	3.3	V+3_3V_STB	1
2	GND	0	GND	2
3	REM_B	0	REM_B	3

[436SXE MODEL only]
OBE MAIN ASSY — R06 D-TUNER ASSY(E)

CN4004(AKM1201-)		Voltage (V)	CN6003(AKM1236-)	
No.	Name		Name	No.
1	GND	0	GND	1
2	TXD_DT	3.3	TXD_DT	2
3	RXD_DT	3.3	RXD_DT	3
4	GND	0	GND	4
5	DT_FNC	3.3	DT_FNC	5
6	GND	0	GND	6
7	CLK_DT	0 to 3.3	CLK_DT	7
8	GND	0	GND	8
9	Y7_DT	0 to 3.3	Y7_DT	9
10	Y6_DT	0 to 3.3	Y6_DT	10
11	GND	0	GND	11
12	Y5_DT	0 to 3.3	Y5_DT	12
13	Y4_DT	0 to 3.3	Y4_DT	13
14	GND	0	GND	14
15	Y3_DT	0 to 3.3	Y3_DT	15
16	Y2_DT	0 to 3.3	Y2_DT	16
17	GND	0	GND	17
18	Y1_DT	0 to 3.3	Y1_DT	18
19	Y0_DT	0 to 3.3	Y0_DT	19
20	GND	0	GND	20
21	CB7_DT	0 to 3.3	CB7_DT	21
22	CB6_DT	0 to 3.3	CB6_DT	22
23	GND	0	GND	23
24	GND	0	GND	24
25	GND	0	GND	25

[436SXE MODEL only]
OBE MAIN ASSY — R06 D-TUNER ASSY(E)

CN4004(AKM1201-)		Voltage (V)	CN6003(AKM1236-)	
No.	Name		Name	No.
26	GND	0	GND	26
27	GND	0	GND	27
28	GND	0	GND	28
29	GND	0	GND	29
30	GND	0	GND	30
31	GND	0	GND	31
32	GND	0	GND	32
33	GND	0	GND	33
34	GND	0	GND	34
35	GND	0	GND	35
36	GND	0	GND	36
37	GND	0	GND	37
38	GND	0	GND	38
39	GND	0	GND	39
40	GND	0	GND	40
41	GND	0	GND	41
42	GND	0	GND	42
43	GND	0	GND	43
44	GND	0	GND	44
45	DE_DT	0	DE_DT	45
46	GND	0	GND	46
47	VD_DT	3.3	VD_DT	47
48	GND	0	GND	48
49	HD_DT	3.3	HD_DT	49
50	GND	0	GND	50

OBE MAIN ASSY — TUNER ASSY

CN4401 (AKM1217-)		Voltage (V)	CN8501 (AKM1217-)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	AIR_R	3.0	AIR_R	3
4	GND	0	GND	4
5	GND	0	GND	5
6	AIR_L	3.0	AIR_L	6
7	GND	0	GND	7
8	GND	0	GND	8
9	GND	0	GND	9
10	SCL_AV	0-3.3	SCL_AV	10
11	SDA_AV	0-3.3	SDA_AV	11
12	GND	0	GND	12
13	GND	0	GND	13
14	V+5V_AIR	5.0	V+5V_AIR	14
15	V+5V_AIR	5.0	V+5V_AIR	15
16	GND	0	GND	16
17	GND	0	GND	17
18	A_TUNER_V	3.9	A_TUNER_V	18
19	GND	0	GND	19
20	V+3_3V_UCOM2	3.3	V+3_3V_UCOM2	20
21	GND	0	GND	21
22	D_CTR_OUT1	3.0	D_CTR_OUT1	22
23	GND	0	GND	23
24	MSP_RESET	5.0	MSP_RESET	24
25	GND	0	GND	25
26	V+9V_AIR	9.0	V+9V_AIR	26
27	V+9V_AIR	9.0	V+9V_AIR	27
28	GND	0	GND	28
29	V+30V	30	V+30V	29
30	V+30V	30	V+30V	30
31	GND	0	GND	31
32	GND	0	GND	32
33	SCL_AIR	0-3.3	SCL_AIR	33
34	SDA_AIR	0-3.3	SDA_AIR	34
35	GND	0	GND	35
36	IN3DET	0/5.0	IN3DET	36
37	IN2DET	0/5.0	IN2DET	37
38	IN2DET_B	0/3.3	IN2DET_B	38
39	LINK_IO	5.0	LINK_IO	39
40	GND	0	GND	40

OBE MAIN ASSY — AUDIO ASSY

CN4029(KM200NA13)		Voltage (V)	CN3752(KM200NA13)	
No.	Name		Name	No.
1	A_NG_B	2.9	A_NG_B	1
2	GND_A	0	GND_A	2
3	AUDIO_L	5.1	AUDIO_L	3
4	GND_A	0	GND_A	4
5	AUDIO_R	5.1	AUDIO_R	5
6	GND_A	0	GND_A	6
7	A_STBY_B	3.3	A_STBY_B	7
8	A_MUTE	0	A_MUTE	8
9	SCL_DGV	0-3.3	SCL_DGV	9
10	SDA_DGV	0-3.3	SDA_DGV	10
11	V+3VD	3.3	V+3VD	11
12	GND	0	GND	12
13	PSW_2	5.2	PSW_2	13

OBE MAIN ASSY — LED ASSY

CN4027(AKM1279)		Voltage (V)	CN8001(KM200NA8)	
No.	Name		Name	No.
1	V+5_1V_STB	5.1	V+5_1V_STB	1
2	V+3_3V_STB	3.3	V+3_3V_STB	2
3	LED_B	0	LED_B	3
4	LED_R	3.3	LED_R	4
5	LED_PICOFF	3.3	LED_PICOFF	5
6	LED_SLEEP	3.3	LED_SLEEP	6
7	GND	0	GND	7
8	AC_DET	0	AC_DET	8

OBE MAIN ASSY — SR ASSY

CN4026(KM200NA9)		Voltage (V)	CN7601(KM200NA9)	
No.	Name		Name	No.
1	GND_D	0	GND_D	1
2	DRF_SW	3.0	DRF_SW	2
3	V+3_3V_UCOM2	3.3	V+3_3V_UCOM2	3
4	TEMP_AIR	2.2	TEMP_AIR	4
5	GND	0	GND	5
6	RXD	3.3	RXD	6
7	TXD	3.3	TXD	7
8	GND	0	GND	8
9	V+3_3V_STB	3.3	V+3_3V_STB	9

[436SXE MODEL only]

OBE MAIN ASSY — R06 D-TUNER ASSY(E)

CN4005 (AKM1217-)		Voltage (V)	CN4000 (AKM1217-)	
No.	Name		Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	GND	0	GND	3
4	GND	0	GND	4
5	GND	0	GND	5
6	GND	0	GND	6
7	DT_SP_R	0	DT_SP_R	7
8	GND	0	GND	8
9	DT_SP_L	0	DT_SP_L	9
10	GND	0	GND	10
11	OPT_R	0	OPT_R	11
12	GND	0	GND	12
13	OPT_L	0	OPT_L	13
14	GND	0	GND	14
15	DT_MON_C	1.8	DT_MON_C	15
16	GND	0	GND	16
17	GND	0	GND	17
18	DT_MON_Y	1.8	DT_MON_Y	18
19	GND	0	GND	19
20	GND	0	GND	20
21	GND	0	GND	21
22	GND	0	GND	22
23	GND	0	GND	23
24	GND	0	GND	24
25	GND	0	GND	25
26	GND	0	GND	26
27	GND	0	GND	27
28	GND	0	GND	28
29	GND	0	GND	29
30	GND	0	GND	30
31	GND	0	GND	31
32	GND	0	GND	32
33	GND	0	GND	33
34	GND	0	GND	34
35	GND	0	GND	35
36	ANT_POW_EU	0	ANT_POW_EU	36
37	POW_DET	0	POW_DET	37
38	RST_DT	3.3	RST_DT	38
39	DT_DET	0	DT_DET	39
40	GND	0	GND	40

OBE MAIN ASSY — POWER SUPPLY UNIT

CN4006(KM200NA16)		Voltage (V)	CN7503(KM200NA16)	
No.	Name		Name	No.
1	AC_DET	3.3	AC_DET	1
2	RELAY	3.3	RELAY	2
3	GND	0	GND	3
4	V+3_3V_STB	3.3	V+3_3V_STB	4
5	GND	0	GND	5
6	V+5_1V_STB	5.1	V+5_1V_STB	6
7	V+5_1V	5.1	V+5_1V	7
8	V+5_1V	5.1	V+5_1V	8
9	GND	0	GND	9
10	V+6_8V	6.6	V+6_8V	10
11	GND	0	GND	11
12	V+12V	12.6	V+12V	12
13	GND	0	GND	13
14	V+17V	19	V+17V	14
15	GND	0	GND	15
16	V+35V	37	V+35V	16

FAN — OBE MAIN ASSY

		Voltage (V)	CN4009(AKM1274-)	
No.	Name		Name	No.
–	–	VH=9.57V	FAN_VCC	1
		VL=7.10V		
–	–	0	FAN_NG1	2
–	–	0	GND	3

[436SXE Model only]

R06 D-TUNER ASSY(E) — POWER SUPPLY UNIT

CN2500(AKM1298)		Voltage (V)	CN102(KM200NA12)	
No.	Name		Name	No.
1	V+35V	37	V+35V	1
2	GND	0	GND	2
3	V+17V	19	V+17V	3
4	GND	0	GND	4
5	V+12V	12.6	V+12V	5
6	GND	0	GND	6
7	V+6_5V	6.6	V+6_5V	7
8	V+5_1V_STB	5.1	V+5_1V_STB	8
9	V+5_1V	5.1	V+5_1V	9
10	V+5_1V	5.1	V+5_1V	10
11	GND	0	GND	11
12	V+3V	3.4	V+3V	12

■ OB DIGITAL ASSY

CN3001(D11) ⇔ MAIN ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	GND	–	GND	–	TP3025
2	MODEL	I	Model distinction	1.7	TP3018
3	A_NG_B	I	(Audio) Ahnormal detect	2.9	TP3012
4	A_STBY_B	O	Audio stand by-signal	3.3	TP3013
5	A_MUTE	O	Audio mute signal input	0	TP3011
6	PSW_A	O	Function stand by signal for audio	2.7	TP3019
7	MR_AC_OFF	I	AC state input for MR side	3.3	TP3038
8	DRF_SW	I	Control signal for large power section	3.3	TP3001
9	SDA_DGV	O	IIC control signal	0-3.3	TP3014
10	SCL_DGV	O	IIC control signal	0-3.3	TP3015
11	REQ_MD	O	Communication demandto main U-COm	0-3.3	TP3016
12	RXD_MD	O	URAT communication data with mai UCOM	0-3.3	TP3163
13	TXD_MD	I	URAT communication data with mai UCOM	0-3.3	TP3166
14	VIS	I	Control signal from Carrera	0	TP3020
15	TEATHER	I	Control signal from pure sinema	0	TP3021
16	VD	I	V sync	0-3.3	TP3037
17	HD	I	H sync	0-3.3	TP3036
18	DE	I	Data enable signal	0-3.3	TP3035
19	GND	–	GND	-	TP3025
20	CLK		Data clock signal	0-3.3	TP3034
21	GND	–	GND	-	TP3025
22	V+3V_UCOM2	I	Vcc +3.3V input for panel side module U-com line	3.3	TP3186
23	GND	–	GND	-	TP3025
24	RA IN9	I	8bit video/signal input (RED)	0-3.3	TP3057
25	RA IN8	I	8bit video/signal input (RED)	0-3.3	TP3056
26	RA IN7	I	8bit video/signal input (RED)	0-3.3	TP3055
27	RA IN6	I	8bit video/signal input (RED)	0-3.3	TP3054
28	RA IN5	I	8bit video/signal input (RED)	0-3.3	TP3053
29	RA IN4	I	8bit video/signal input (RED)	0-3.3	TP3052
30	RA IN3	I	8bit video/signal input (RED)	0-3.3	TP3051
31	RA IN2	I	8bit video/signal input (RED)	0-3.3	TP3050
32	GND	–	GND	-	TP3025
33	GA IN9	I	8bit video/signal input (GREEN)	0-3.3	TP3067
34	GA IN8	I	8bit video/signal input (GREEN)	0-3.3	TP3066
35	GA IN7	I	8bit video/signal input (GREEN)	0-3.3	TP3065
36	GA IN6	I	8bit video/signal input (GREEN)	0-3.3	TP3064
37	GA IN5	I	8bit video/signal input (GREEN)	0-3.3	TP3063
38	GA IN4	I	8bit video/signal input (GREEN)	0-3.3	TP3062
39	GA IN3	I	8bit video/signal input (GREEN)	0-3.3	TP3061
40	GA IN2	I	8bit video/signal input (GREEN)	0-3.3	TP3060
41	GND	–	GND	-	TP3025
42	BA IN9	I	8bit video/signal input (BLUE)	0-3.3	TP3077
43	BA IN8	I	8bit video/signal input (BLUE)	0-3.3	TP3076
44	BA IN7	I	8bit video/signal input (BLUE)	0-3.3	TP3075
45	BA IN6	I	8bit video/signal input (BLUE)	0-3.3	TP3074
46	BA IN5	I	8bit video/signal input (BLUE)	0-3.3	TP3073
47	BA IN4	I	8bit video/signal input (BLUE)	0-3.3	TP3072
48	BA IN3	I	8bit video/signal input (BLUE)	0-3.3	TP3071
49	BA IN2	I	8bit video/signal input (BLUE)	0-3.3	TP3070
50	GND	–	GND	-	TP3025

CN3505(D19) ⇔ X DRIVE ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	PSW	O	Function standby control signal	0	TP3519
2	XSUS_PD	I	X drive PD signal	0	TP3513
3	XDD_PD	I	X drive PD signal	0	TP3514
4	XDRV_PD	I	X drive PD signal	0	TP3515
5	GND	–	GND	-	-
6	XRsv1	I	X drive control signal (reserve)	-	
7	XSUS-MSK	I	X drive control signal (reserve)	0-3.3	
8	GND	–	GND	-	-
9	XNR-D	O	X drive control signal	0-3.3	
10	GND	–	GND	-	-
11	XSUS-G	O	X drive control signal	0-3.3	
12	GND	–	GND	-	-
13	XSUS-D	O	X drive control signal	0-3.3	
14	GND	–	GND	-	-
15	XSUS-U	O	X drive control signal	0-3.3	
16	GND	–	GND	-	-
17	XSUS-B	O	X drive control signal	0-3.3	
18	GND	–	GND	-	-

CN3506(D20) ⇔ Y DRIVE ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	GND	–	GND	-	-
2	SCN5V_PD	I	Y drive PD signal	0	TP3507
3	SI_L	O	Scan control signal	0-3.3	
4	SI_H	O	Scan control signal	0-3.3	
5	GND	–	GND	-	-
6	CLR	O	Scan control signal	0-3.3	
7	CLK	O	Scan control signal	0-3.3	
8	GND	–	GND	-	-
9	LE	O	Scan control signal	0-3.3	
10	OC2	O	Scan control signal	0-3.3	
11	OC1(-1)	O	Scan control signal	0-3.3	
12	GND	–	GND	-	-
13	YSUS-B	O	Y drive/control signal	0-3.3	
14	YSUS-U	O	Y drive/control signal	0-3.3	
15	GND	–	GND	-	-
16	YSUS-D	O	Y drive/control signal	0-3.3	
17	YSUS-G	O	Y drive/control signal	0-3.3	
18	GND	–	GND	-	-
19	YPR-U	O	Y drive/control signal	0-3.3	
20	YRsv1	–	Y drive/control signal (reserve)	-	
21	GND	–	GND	-	-
22	YSUS-MSK	O	Y drive/control signal	0-3.3	
23	YNRST	O	Y drive/control signal	0-3.3	
24	YRsv2	–	Y drive/control signal (reserve)	-	
25	GND	–	GND	-	-
26	YENOFS	O	Y drive/control signal	0-3.3	
27	YRsv3	O	Y drive/control signal (reserve)	-	
28	YSOFT-D	O	Y drive/control signal	0-3.3	
29	GND	–	GND	-	-
30	VOFS_ADJ		Vofs offset adjust	1.85	TP3181
31	VYPRST_ADJ	O	Reset voltage adjust	1.21	TP3182
32	GND	–	GND	-	-
33	GND	–	GND	-	-
34	N.C	–	Not Connected	-	-
35	GND	–	GND	-	-
36	YDD_PD	I	Y drive PD signal	0	TP3509
37	YSUS_PD	I	Y drive PD signal	0	TP3510
38	SCAN_PD	I	Y drive PD signal	0	TP3511
39	YDRV_PD	I	Y drive PD signal	0	TP3512
40	PSW	O	Function standby signal	0	TP3518

CN3501(D15) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not Connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3501
3	N.C		Not Connected	-	
4	GND	–	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	–	GND	-	-
8	GND	–	GND	-	-
9	N.C		Not Connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not Connected	-	
13	GND	–	GND	-	-
14	N.C		Not Connected	-	
15	TB-	O	LVDS data	1-1.4	
16	TB+	O	LVDS data	1-1.4	
17	N.C		Not Connected	-	
18	GND	–	GND	-	-
19	N.C		Not Connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not Connected	-	
23	GND	–	GND	-	-
24	N.C		Not Connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not Connected	-	
28	GND	–	GND	-	-
29	N.C		Not Connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not Connected	-	
33	GND	–	GND	-	-
34	GND	–	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	–	GND	-	-
38	ADRS_3	O	Output timing control	0	
39	ADRS_2	O	Output timing control	0	
40	GND	–	GND	-	-

CN3502(D16) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not Connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3502
3	N.C		Not Connected	-	
4	GND	–	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	–	GND	-	-
8	GND	–	GND	-	-
9	N.C		Not Connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not Connected	-	
13	GND	–	GND	-	-
14	N.C		Not Connected	-	
15	TB-	O	LVDS data	1-1.4	
16	TB+	O	LVDS data	1-1.4	
17	N.C		Not Connected	-	
18	GND	–	GND	-	-
19	N.C		Not Connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not Connected	-	
23	GND	–	GND	-	-
24	N.C		Not Connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not Connected	-	
28	GND	–	GND	-	-
29	N.C		Not Connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not Connected	-	
33	GND	–	GND	-	-
34	GND	–	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	–	GND	-	-
38	ADRS_3	O	Output timing control	0	
39	ADRS_2	O	Output timing control	0	
40	GND	–	GND	-	-

CN3503(D17) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not connected	-	
2	ADR_PD	I	Adderss PD signal	0-4	TP3503
3	N.C		Not connected	-	
4	GND	–	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	–	GND	-	-
8	GND	–	GND	-	-
9	N.C		Not connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+		LVDS data	1-1.4	
12	N.C		Not connected	-	
13	GND	–	GND	-	-
14	N.C		Not connected	-	
15	TB-	O	LDVS data	1-1.4	
16	TB+	O	LDVS data	1-1.4	
17	N.C		Not connected	-	
18	GND	–	GND	-	-
19	N.C		Not connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not connected	-	
23	GND	–	GND	-	-
24	N.C		Not connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not connected	-	
28	GND	–	GND	-	-
29	N.C		Not connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not connected	-	
33	GND	–	GND	-	-
34	GND	–	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	–	GND	-	-
38	ADRS_3	O	Output timing controled	0	
39	ADRS_2	O	Output timing controled	0	
40	GND	–	GND	-	-

CN3504(D18) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not connected	-	
2	ADR_PD	I	Adderss PD signal	0-4	TP3504
3	PSIZE	I	Siza distinction signal	3.3	
4	GND	–	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	–	GND	-	-
8	GND	–	GND	-	-
9	N.C		Not connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not connected	-	
13	GND	–	GND	-	-
14	N.C		Not connected	-	
15	TB-	O	LDVS data	1-1.4	
16	TB+	O	LDVS data	1-1.4	
17	N.C		Not connected	-	
18	GND	–	GND	-	-
19	N.C		Not connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not connected	-	
23	GND	–	GND	-	-
24	N.C		Not connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not connected	-	
28	GND	–	GND	-	-
29	N.C		Not connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not connected	-	
33	GND	–	GND	-	-
34	GND	–	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	–	GND	-	-
38	ADRS_3	O	Output timing controled	0	
39	ADRS_2	O	Output timing controled	0	
40	GND	–	GND	-	-

CN5601(D1) ⇔ POWER SUPPLY UNIT

Pin No.	Name	/OI	Function	Voltage (V)	TP
1	V+12V	I	+12V Vcc input	12	TP3606
2	V+12V	I	+12V Vcc input	12	TP3606
3	GND	–	GND	-	-
4	GND	–	GND	-	-
5	N.C		Not connected	-	
6	GND	–	GND	-	-
7	N.C		Not connected	-	
8	EXT_PD	O	Power down signal	0	TP3632
9	VSUS_ADJ	O	Vsus adjust signal	1.67	TP3633
10	PS_PD	I	Powerdown detect signal for POWER SUPPLY	0	TP3634
11	RELAY	O	Replay control signal	3.3	TP3626
12	DRF_B	O	Control signal for large power section	3.3	TP3616
13	AC_DET	I	AC state output panel side	3.3	TP3635
14	PD_TRG_B	I	Powerdown trigga	3.3	TP3636

CN3002(D12) ⇔ MAIN ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	GND	O	GND	-	TP3024
2	GND	O	GND	-	TP3024
3	V+1V_D	O	+1.2V Vcc Output	1.24	TP3022
4	V+1V_D	–	+1.2V Vcc Output	1.24	TP3022
5	GND	–	GND	-	TP3024
6	GND	–	GND	-	TP3024
7	V+3V_D	O	+3.3V Vcc Output	3.3	TP3023
8	V+3V_D	O	+3.3V Vcc Output	3.3	TP3023

CN3151(D24) ⇔ PANEL SENSOR ASSY

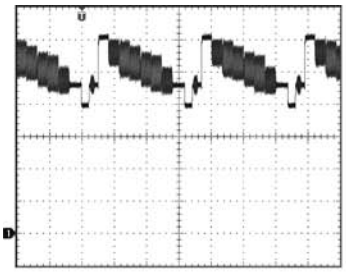
Pin No.	Name	I/O	Function	Voltage (V)	TP
1	STA3.3V	O	+3.3V Vcc Output	3.3	TP3159
2	TEMP1	I	Panel thermal sensor signal	2	TP3161
3	GND	–	GND	-	TP3162

3.12 WAVEFORMS

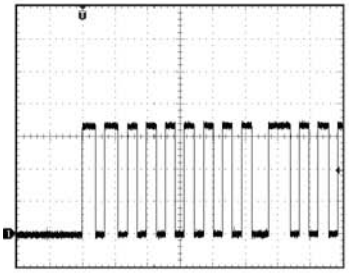
Note : The encircled numbers denote measuring point in the schematic diagram.
Refer to service manual (ARP3334).

OBE MAIN ASSY

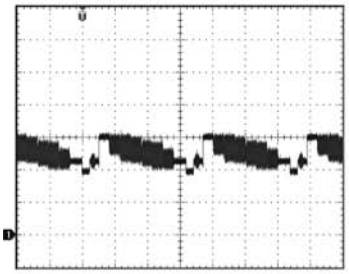
1 TP4401 (A_TUNER_V)
(A_TUNER_V)
V : 500mV/div H : 20µsec/div



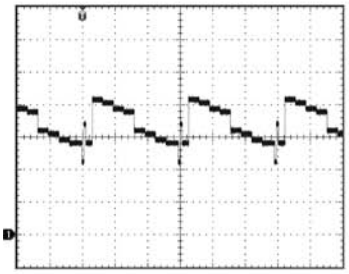
2 TP4412 (AIR_HS)
(AIR_HS)
V : 1V/div H : 20µsec/div



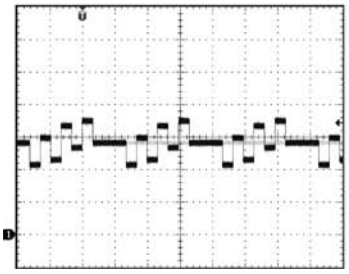
3 IC4804-pin 57
(A_TUNER_V)
V : 1V/div H : 20µsec/div



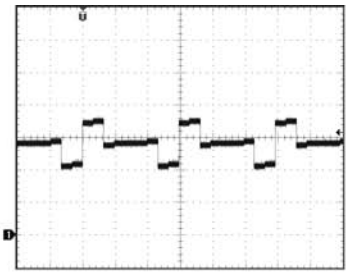
4 TP4815 (Component Y)
(GY_AD)
V : 500mV/div H : 10µsec/div



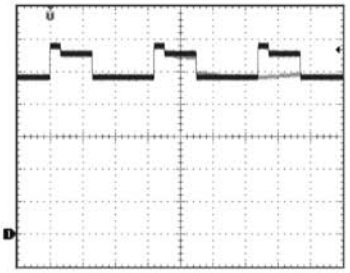
5 TP4816 (Component Cb)
(BCB_AD)
V : 500mV/div H : 10µsec/div



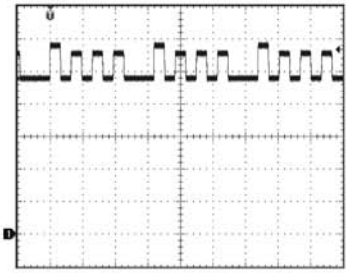
6 TP4817 (Component Cr)
(RCR_AD)
V : 500mV/div H : 10µsec/div



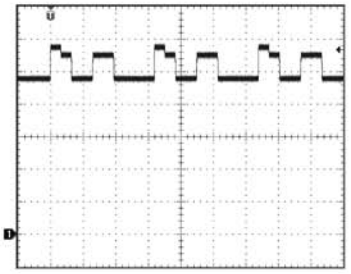
7 TP4818 (SCART G)
(GY_MVDEC)
V : 500mV/div H : 20µsec/div



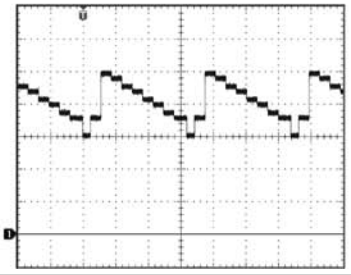
8 TP4819 (SCART B)
(BCB_MVDEC)
V : 500mV/div H : 20µsec/div



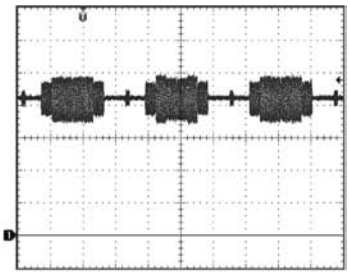
9 TP4820 (SCART R)
(RCR_MVDEC)
V : 500mV/div H : 20µsec/div



10 IC4804-pin 49 (MAIN_Y)
(MAIN_Y)
V : 500mV/div H : 20µsec/div



11 IC4804-pin 47 (MAIN_C)
(MAIN_C)
V : 500mV/div H : 20µsec/div

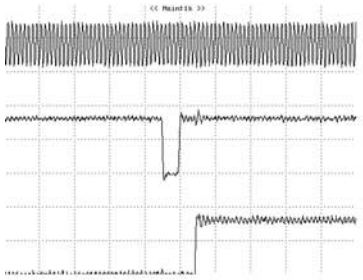


OB DIGITAL ASSY
DIGITAL IF BLOCK

MODULE UCOM BLOCK

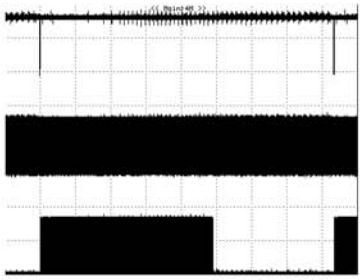
1 **CH1:TP3030 (CLK)**
CH2:TP3033 (HD)
CH3:TP3031 (DE)

V : 2V/DIV H : 100ns/DIV



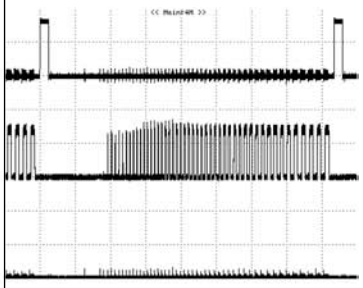
4 **CH1:TP3032 (VD)**
CH2:TP3033 (HD)
CH3:TP3031 (DE)

V : 2V/DIV H : 2ms/DIV



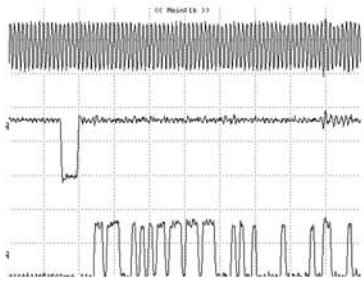
5 **CH1:TP3194 (YPP-U)**
CH2:TP3197 (ADR_PD1)
CH3:TP3195 (IC3155#6)

V : 2V/DIV H : 2ms/DIV



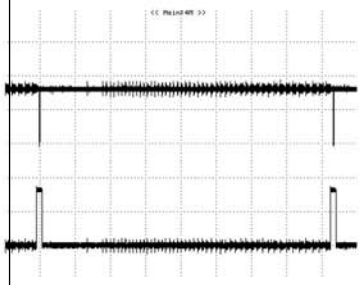
2 **CH1:TP3030 (CLK), CH2:TP3033 (HD)**
CH3:BA[2] (DATA)

V : 2V/DIV H : 100ns/DIV



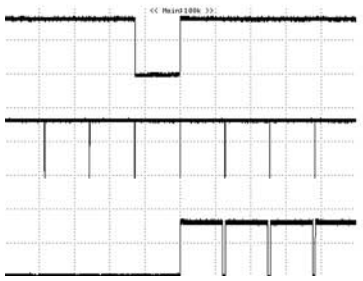
6 **CH1:TP3032 (VD)**
CH2:TP3179 (STOP_SQ)

V : 2V/DIV H : 2ms/DIV



3 **CH1:TP3032 (VD)**
CH2:TP3033 (HD)
CH3:TP3031 (DE)

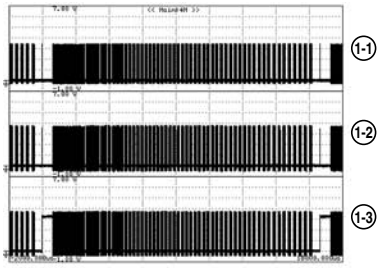
V : 2V/DIV H : 10μs/DIV



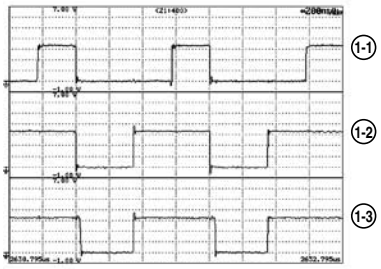
43 ADDRESS ASSY

43 ADDRESS RESONANCE BLOCK

1 Control signal of resonance circuit (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
1-1 CH1 : ADR_B2
V : 1V/div H : 2msec/div
1-2 CH2 : ADR_U2
V : 1V/div H : 2msec/div
1-3 CH3 : ADR_D2
V : 1V/div H : 2msec/div

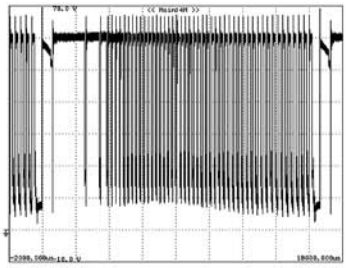


1 Control signal of resonance circuit (2 FS)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
1-1 CH1 : ADR_B2
V : 1V/div H : 2msec/div
1-2 CH2 : ADR_U2
V : 1V/div H : 2msec/div
1-3 CH3 : ADR_D2
V : 1V/div H : 2msec/div

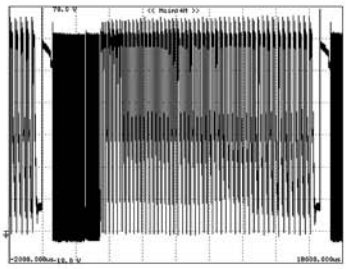


43 ADDRESS LOGIC BLOCK

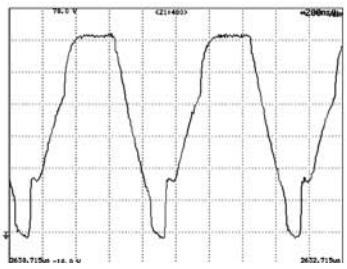
2 VADR (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div



2 VADR (1 field)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div

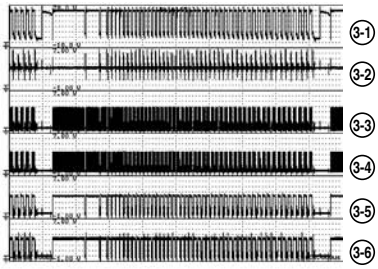


2 VADR (2 FS)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 200nsec/div

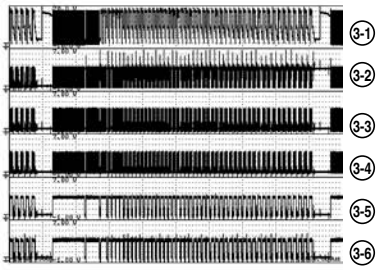


TCP LOGIC

3 Incoming signal of TCP (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
3-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div
3-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 2msec/div
3-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 2msec/div
3-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 2msec/div
3-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 2msec/div
3-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 2msec/div



3 Incoming signal of TCP (1 field)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
3-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div
3-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 2msec/div
3-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 2msec/div
3-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 2msec/div
3-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 2msec/div
3-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 2msec/div

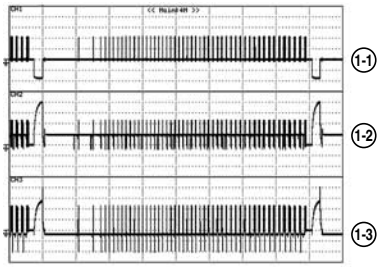


3 Incoming signal of TCP (Resonance part)
Input : VIDEO
Signal : Checkered pattern of Black-White (MKSS13)
3-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 200nsec/div
3-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 200nsec/div
3-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 200nsec/div
3-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 200nsec/div
3-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 200nsec/div
3-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 200nsec/div

43 X DRIVE, 43 Y DRIVE ASSY

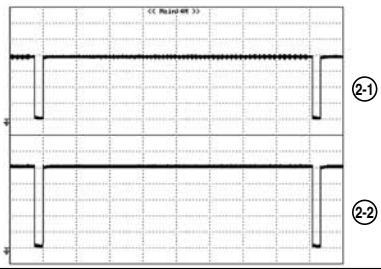
1 Drive output signal (1 field, Color-bar)

1-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 100V/div H : 2msec/div (X DRIVE Assy)
1-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 100V/div H : 2msec/div (SCAN A Assy)
1-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 100V/div H : 2msec/div (Y DRIVE Assy)



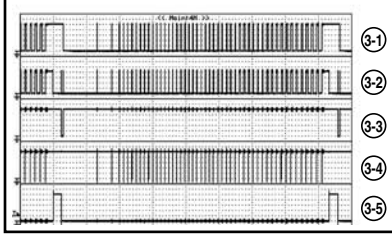
2 X Drive pulse control signal (Color-bar)

2-1 **CH1 : K1009 (XSUS-MSK) - K1001 (DGND)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
2-2 **CH2 : K1005 (XNR-D) - K1001 (DGND)**
V : 1V/div H : 2msec/div (X DRIVE Assy)



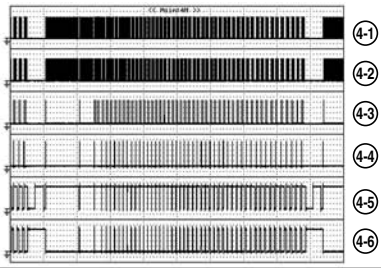
3 Y Drive pulse control signal (Color-bar)

3-1 **CH1 : K2007 (YNOFS) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-2 **CH2 : K2005 (YSUS-MSK) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-3 **CH3 : K2008 (YNRST) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-4 **CH4 : K2006 (SOFT-D) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-5 **CH5 : K2023 (YPR-U) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)



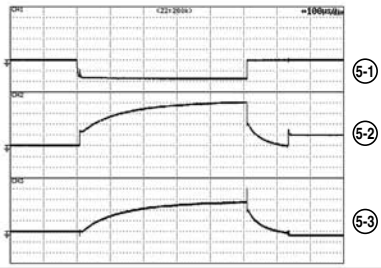
4 Scan control signal (1 field, Color-bar)

4-1 **CH1 : TP2001 (LE) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-2 **CH2 : TP2008 (CLK) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-3 **CH3 : TP2003 (SI-H) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-4 **CH4 : TP2004 (CLR) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-5 **CH5 : TP2005 (OC2) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-6 **CH6 : TP2006 (OC1) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)



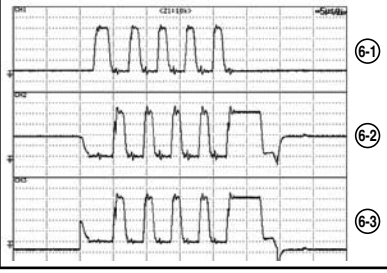
5 Reset pulse signal

5-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 100V/div H : 100µsec/div (X DRIVE Assy)
5-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 100V/div H : 100µsec/div (SCAN A Assy)
5-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 100V/div H : 100µsec/div (Y DRIVE Assy)



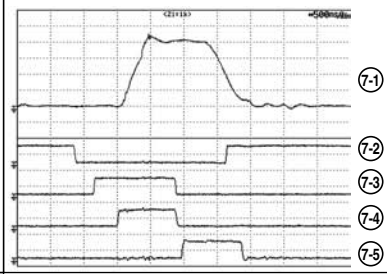
6 Sustain pulse signal (1 sub, sub field)

6-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 50V/div H : 5µsec/div (X DRIVE Assy)
6-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 50V/div H : 5µsec/div (SCAN A Assy)
6-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 50V/div H : 5µsec/div (Y DRIVE Assy)



7 Sustain signal

7-1 **CH1 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 50V/div H : 500nsec/div (Y DRIVE Assy)
7-2 **CH2 : K2004 (YSUS-G) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-3 **CH3 : K2011 (YSUS-U) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-4 **CH4 : K2009 (YSUS-B) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-5 **CH5 : K2010 (YSUS-D) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)



5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10[1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10[3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10[1] → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVXK5	PDP-436RXE /WYVI5
	1..R06 D-TUNER ASSY	AWE1304	Not used	Not used
	1..OBE MAIN ASSY	AWV2238	AWV2239	AWV2239
NSP	1..OBE FUKUGO ASSY	AWV2237	AWV2237	AWV2237
	2..AUDIO ASSY	AWW1087	AWW1087	AWW1087
	2..SR ASSY	AWW1088	AWW1088	AWW1088
	2..TUNER ASSY	AWW1089	AWW1089	AWW1089
	2..FRONT ASSY	AWW1090	AWW1090	AWW1090
	2..LED ASSY	AWW1091	AWW1091	AWW1091
	2..IR ASSY	AWW1092	AWW1092	AWW1092
	2..KEY ASSY	AWW1093	AWW1093	AWW1093
	2..PANEL SENSOR ASSY	AWW1094	AWW1094	AWW1094
	2..SUBPOWER ASSY	AWW1095	AWW1095	AWW1095
	1..OB DIGITAL ASSY	AWV2244	AWV2244	AWV2244
NSP	1..PANEL CHASSIS (436) ASSY	AWU1145	AWU1145	AWU1145
NSP	2..43 ADDRESS ASSY	AWV2204	AWV2204	AWV2204
NSP	2..43 SCAN ASSY	AWV2207	AWV2207	AWV2207
NSP	3..43 SCAN A ASSY	AWW1018	AWW1018	AWW1018
NSP	3..43 SCAN B ASSY	AWW1019	AWW1019	AWW1019
NSP	1..43 X DRIVE ASSY ASSY	AWV2255	AWV2255	AWV2255
NSP	2..43 X DRIVE ASSY	AWW1074	AWW1074	AWW1074
NSP	2..SUS CLAMP 1 ASSY	AWW1022	AWW1022	AWW1022
NSP	2..SUS CLAMP 2 ASSY	AWW1023	AWW1023	AWW1023
	1..43 Y DRIVE ASSY	AWV2256	AWV2256	AWV2256
⚠	1..POWER SUPPLY UNIT	AXY1133	AXY1133	AXY1133

MAIN ASSY

AWV2238 and AWV2239 are constructed the same except for the following :

Mark	Symbol and Description	AWV2238	AWV2239
	BOARD IF BLOCK		
	R4007	RS1/16SS0R0J	Not used
	R4008	Not used	RS1/16SS0R0J
	R4012	RS1/16SS101J	Not used
	CN4004 50P CONNECTOR	AKM1201	Not used
	CN4005 40P CONNECTOR	AKM1217	Not used
	AV SW BLOCK		
	Q4817, Q4819	2SC4116	Not used
	Q4822, Q4823	2SA1586	Not used
	C4881	CKSSYF104Z16	Not used
	C4882, C4883 (10/16)	DCH1165	Not used
	R4942, R4943	RS1/16S182J	Not used

Mark	Symbol and Description	AWV2238	AWV2239
	R4953, R4968	RS1/16SS101J	Not used
	R4954, R4969	RS1/16S470J	Not used
	R4955, R4956	RS1/16S102J	Not used
	R4958, R4971	RS1/16SS102J	Not used
	R4957, R4970	RS1/16SS104J	Not used
	IFUCOM BLOCK		
	Q5005	DTA124EUA	Not used
	R5076	RS1/16SS202J	Not used
	R5079	RS1/16SS0R0J	Not used
	MAINUCOM BLOCK		
	IC5204	TC74VHC125FTS1	Not used
	C5210	CKSSYF104Z16	Not used
	R5231, R5243	RS1/16SS103J	Not used
	R5251	Not used	RS1/16SS103J

R06 D-TUNER ASSY (436SXE model only)

[TUNER BLOCK]

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1001		STV0361L
	IC1000		UPC3221GV
	Q1001		2SC2412K
	Q1002		DTC124EUA
	Q1003,Q1004		RK7002
	D1001		1SS355
⚠	D1000		SM15T6V8A

COILS AND FILTERS

Mark	No.	Description	Part No.
	L1002		LCYAR82J2520
	F1001,F1003-F1010	FERRITE BEAD	VTF1091
	F1012-F1014	FERRITE BEAD	VTF1091
	F1100,F1101	FERRITE BEAD	VTF1091
	F1202-F1204	FERRITE BEAD	VTF1091
	F1000	SAW FILTER	XTF1002
	L1200	CHIP FERRITE BEAD	XTX1001
	L1004	CHIP FERRITE BEAD	XTX1003
	L1000	CHIP BALUN TRANS	XTX1005

CAPACITORS

Mark	No.	Description	Part No.
	C1054		BCG1050
	C1028,C1038,C1042,C1046,C1051		CCG1205
	C1043,C1044		CCSRCJ3R0C50
	C1020		CEHVKW100M16
	C1019		CEHVKW100M50
	C1004,C1055		CEHVKW101M6R3
	C1010		CEHVKW2R2M50
	C1102		CEHVKW331M6R3
	C1018,C1027,C1029,C1050		CEHVKW470M16
	C1056,C1057		CEHVKW470M16
	C1015		CKSRYB102K50
	C1013,C1021,C1040,C1041,C1045		CKSRYB103K50
	C1001-C1003,C1017,C1022		CKSRYB104K16
	C1025,C1026,C1030-C1035,C1037		CKSRYB104K16
	C1039,C1049,C1053,C1058-C1062		CKSRYB104K16
	C1036		CKSRYB105K10

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
⚠	FU1200	CHIP FUSE (0.25A)	XEK1003
	X1100	CRYSTAL (27MHz)	XSS1010

[DEMUX BLOCK]

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC2001		SN74LVU04APW
	IC2000		STI5517DWAL
	IC2002		TC74VHC08FTS1
	Q2000		2SC4081
	D2000		DA204U
	D2002		HVU307
	D2005,D2009		RB501V-40
	D2001		UDZS8R2(B)
	VA2002		AVR-M1608C120MT2AB

COILS AND FILTERS

Mark	No.	Description	Part No.
	F2000-F2003	FERRITE BEAD	VTF1091
	L2000	CHIP FERRITE BEAD	XTX1003

CAPACITORS

Mark	No.	Description	Part No.
	C2014,C2016		CCSRCH100D50
	C2000,C2026,C2030		CCSRCH101J50
	C2009		CCSRCH330J50
	C2011,C2012		CCSRCH390J50
	C2007		CCSRCH471J50
	C2032-C2034,C2036		CEHVKW470M16
	C2008,C2017,C2020,C2021		CKSRYB102K50
	C2013		CKSRYB105K10
	C2001		CKSRYB471K50
	C2002,C2003,C2005,C2006		CKSRYF104Z16
	C2018,C2019,C2022-C2025,C2028		CKSRYF104Z16
	C2035,C2037-C2041,C2043-C2045		CKSRYF104Z16
	C2047,C2048		CKSRYF104Z16
	C2015		CKSRYF105Z10
	C2027,C2029,C2042,C2046		CKSRYF223Z50
	C2004		CKSRYF474Z16

RESISTORS

Mark	No.	Description	Part No.
	R2010,R2018,R2042		RAB4C103J
	R2070,R2071		RAB4CQ220J
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	X2001	CRYSTAL	ASS1172
	X2000	CRYSTAL (27MHz)	BSS1112

Mark No.	Description	Part No.
	[MEMORY BLOCK]	
	SEMICONDUCTORS	
	IC3000,IC3003	K4S281632F-UC75
	COILS AND FILTERS	
	L3005 CHIP FERRITE BEAD	XTX1001
	L3003 CHIP FERRITE BEAD	XTX1003
	CAPACITORS	
	C3010	CEHVKW470M16
	C3000,C3003,C3007,C3008,C3012	CKSRYF104Z16
	C3017,C3020-C3022	CKSRYF104Z16
	C3001,C3002,C3004,C3014,C3015	CKSRYF223Z50
	C3018,C3019,C3023,C3024	CKSRYF223Z50
	RESISTORS	
	R3004-R3014	RAB4CQ470J
	Other Resistors	RS1/16S###J
	[AV BLOCK]	
	SEMICONDUCTORS	
	IC4000	CS4334-KS
	IC4003	CS8406CZZ
	IC4100	PCM1803DB
	IC4002	RC4558D
	IC4001	SN74LVU04APW
	Q4001,Q4002	2SC4081
	COILS AND FILTERS	
	F4000,F4100 CHIP FERRITE BEAD	VTF1091
	CAPACITORS	
	C4000,C4002	CCG1205
	C4010,C4011,C4042	CCSRCH101J50
	C4008,C4009	CCSRCH121J50
	C4007,C4013	CCSRCH220J50
	C4019,C4102-C4104,C4108-C4113	CEHVKW100M16
	C4004	CEHVKW2R2M50
	C4012,C4022,C4023,C4029,C4039	CEHVKW470M16
	C4006	CKSRYB102K50
	C4001,C4014,C4032,C4033,C4038	CKSRYB103K50
	C4040,C4041	CKSRYB105K10
	C4003,C4005,C4017,C4018,C4021	CKSRYF104Z16
	C4024,C4043,C4105-C4107	CKSRYF104Z16
	RESISTORS	
	R4042,R4045,R4046	RS1/16S2000F
	Other Resistors	RS1/16S###J
	OTHERS	
	CN4000 40P CONNECTOR	AKM1217
	JA4000 OPTICAL OUT MODULE	GP1FM513TZ
	X4000 CRYSTAL (12.288MHz)	XSS1006
	[COMMON-INTERFACE BLOCK]	
	SEMICONDUCTORS	
	IC5001	CIMAXSP2L
	IC5000	ST890CDR
	IC5002	TC74LCX245FTS1
	IC5003,IC5004	TC74LCX373FT
	Q5000	2SC4081
	Q5001	DTA143EUA
	Q5002	DTC124EUA

Mark No.	Description	Part No.
	CAPACITORS	
	C5005,C5100	CEHVKW470M16
	C5001	CKSRYB105K10
	C5003,C5004,C5006,C5008-C5013	CKSRYF104Z16
	RESISTORS	
	R5014,R5019,R5022,R5024,R5030	RAB4CQ470J
	R5032,R5036-R5038,R5045-R5050	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN5000 PCMCIA CONNECTOR	XKP1003
	[POWER BLOCK]	
	SEMICONDUCTORS	
	IC6002	BA05FP
	IC6003	FPF2002
	IC6001	M5291FP
	IC6200	TC74LCX245FTS1
	Q6006	2SB1188
	Q6100	2SC4081
	Q6003,Q6005,Q6010	DTA143EUA
	Q6001,Q6009,Q6011,Q6200	DTC124EUA
	Q6008	TPC8209
	D6003,D6100-D6102	1SS355
	D6001	RSX201L-30
	D6103	UDZS30(B)
	COILS AND FILTERS	
	L6000	LCYAR82J2520
	F6000 CHIP FERRITE BEAD	VTF1091
	L6001,L6100,L6101 CHIP INDUCTOR (33UH)	XTH1001
	CAPACITORS	
	C6027	CCSRCH101J50
	C6010	CCSRCH331J50
	C6004	CEHVKW100M50
	C6017,C6028,C6036,C6042,C6044	CEHVKW101M6R3
	C6031	CEHVKW2R2M50
	C6000,C6026,C6104-C6106	CEHVKW331M6R3
	C6001,C6011,C6013-C6015,C6019	CEHVKW470M16
	C6023,C6100	CEHVKW470M16
	C6022	CKSRYB105K10
	C6003,C6005,C6006,C6012,C6018	CKSRYF104Z16
	C6020,C6021,C6025,C6029,C6030	CKSRYF104Z16
	C6033,C6038,C6102,C6200	CKSRYF104Z16
	C6002,C6035	CKSRYF223Z50
	C6008,C6016	CKSRYF474Z16
	RESISTORS	
	R6031	RAB4C221J
	R6012-R6014	RAB4C2R2J
	R6204,R6205	RAB4CQ101J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN6003 50P CONNECTOR	AKM1236
	CN6000 PHP CONNECTOR 12P	AKM1298

Mark	No.	Description	Part No.
[PC CARD BLOCK]			
SEMICONDUCTORS			
	IC3002		XYW1005
OTHERS			
	16-18	SCREW	ABZ30P060FTC
	11	PCMCIA EJECTOR	ANG2673
	12-15	SCREW	PMZ20P100FNI
	9	TOP CAN	XNG1002

OBE MAIN ASSY (436SXE model)

Mark	No.	Description	Part No.
[BOARDIF BLOCK]			
SEMICONDUCTORS			
	IC4003-IC4005, IC4007		TC74VCX541FT
	Q4001, Q4010		DTC124EUA
CAPACITORS			
	C4036		CCSRCH101J50
	C4012		CCSSCH101J50
	C4001, C4002, C4051, C4063		CKSRYB105K6R3
	C4003-C4006		CKSRYB221K50
	C4011, C4013-C4015		CKSSYF104Z16
RESISTORS			
	R4028, R4029, R4032-R4037		RAB4CQ220J
	R4040-R4043, R4047, R4051		RAB4CQ220J
	R4009-R4011		RS1/10S0R0J
	R4050, R4052, R4058, R4061-R4064		RS1/16S###J
	R4102, R4105, R4107, R4110-R4113		RS1/16S###J
	Other Resistors		RS1/16SS###J
OTHERS			
	CN4004	50P CONNECTER	AKM1201
	CN4001, CN4005	40P CONNECTER	AKM1217
	CN4009, CN4028	CONNECTOR	AKM1274
	CN4027	CONNECTOR	AKM1279
	CN4011	50P CONNECTER	AKM1345
[REG BLOCK]			
SEMICONDUCTORS			
	IC4212, IC4214		BD6522F
	IC4211, IC4213		MM1661JH
	IC4202		NCP1117ST15
	IC4209		NCP1117ST18
	IC4201		PQ025ENA1ZPH
	IC4204, IC4205		PQ033ENA1ZPH
	IC4206		PQ050DNA1ZPH
	IC4203		PQ090DNA1ZPH
	Q4201		DTC124EUA
	D4201-D4206, D4209, D4211, D4212		1SS355
COILS AND FILTERS			
	L4201	INDUCTOR	BTH1111
⚠	L4204-L4206	CHIP BEADS FILTER	BTX1042
⚠	F4201-F4203, F4205, F4207	EMI FILTER	CCG1162
CAPACITORS			
	C4201, C4206, C4209, C4215, C4220		ACG7046
	C4240, C4250, C4253, C4255, C4264	(10/6.3)	ACG7046
	C4210, C4244, C4269	(4700/63)	ACH1429
	C4259		CCSRCH471J50
	C4205, C4219, C4224, C4228		CEHVKW101M6R3
	C4226		CEHVKW220M16
	C4213, C4234		CEHVKW470M16
	C4214		CKSRYB104K16
	C4203, C4217, C4223		CKSRYB105K10
	C4266		CKSRYB471K50
	C4229, C4252		CKSSYB104K10
	C4232		CKSSYB471K50
	C4204, C4212, C4227, C4251, C4256		CKSSYF104Z16
	C4258, C4261, C4262, C4265, C7267		CKSSYF104Z16
	C4211, C4225	(10/16)	DCH1165
RESISTORS			
	R4221, R4226		RS1/10S0R0J
	R4228-R4231		RS1/16S###J
	Other Resistors		RS1/16SS###J
[TUNER IF BLOCK]			
SEMICONDUCTORS			
	Q4404		2SA1586
	Q4401, Q4402		2SC4116
	Q4414		DTA124EUA
	Q4413		DTC124EUA
	Q4405		HN1B04FU
	D4401		UDZS33(B)
CAPACITORS			
	C4416, C4459	(10/6.3)	ACG7046
	C4420		CKSRYB332K50
	C4401, C4402		CKSRYF104Z50
RESISTORS			
	R4401, R4416, R4419, R4452, R4460		RS1/16S###J
	Other Resistors		RS1/16SS###J
OTHERS			
	CN4401	40P CONNECTER	AKM1217
[AV IO BLOCK]			
SEMICONDUCTORS			
	Q4614, Q4615, Q4626, Q4639		2SA1586
	Q4641, Q4642, Q4645, Q4646		2SA1586
	Q4602-Q4605, Q4607, Q4608		2SC4116
	Q4618-Q4620, Q4622-Q4624, Q4629		2SC4116
	Q4632-Q4636, Q4643		2SC4116
	Q4611, Q4612		2SD2114K
	Q4606, Q4616, Q4621, Q4631		DTA124EUA
	Q4610		DTA143EUA
	Q4613, Q4617		DTC124EUA
	Q4601, Q4609, Q4625, Q4630		HN1A01FU
	Q4644		HN1C01FU
	D4602, D4607, D4611, D4621		1SS301
	D4631-D4633		1SS302
	D4606, D4626		1SS355
COILS AND FILTERS			
	L4602, L4604, L4606, L4608		LCTAW1R0J2520
	L4611, L4612		LCTAW1R0J2520
	L4601, L4603, L4605, L4607		LCTAW560J2520
	L4609, L4610		LCTAW560J2520
CAPACITORS			
	C4601, C4605, C4620, C4621, C4634		ACG7046
	C4636	(10/6.3)	ACG7046
	C4602, C4623, C4635, C4639, C4640		ACH1368
	C4644	(220/10)	ACH1368

Mark	No.	Description	Part No.
	C4607, C4611, C4617, C4619, C4624		CCG1205
	C4628, C4643, C4649	(2.2/10)	CCG1205
	C4618		CEHAT471M10
	C4606, C4608, C4609, C4612		CKSRYB105K10
	C4615, C4616, C4626, C4629		CKSRYB105K10
	C4631-C4633, C4641, C4642		CKSRYB105K10
	C4645, C4646, C4650, C4652-C4654		CKSRYB105K10
	C4661-C4663		CKSRYB105K10
	C4610, C4613, C4627, C4630		CKSSYB102K50
	C4647, C4648		CKSSYB102K50
⚠	C4671-C4676		CKSSYB102K50
	C4604, C4614, C4622, C4637, C4651		CKSSYF104Z16
	C4603, C4625, C4638	(10/16)	DCH1165

RESISTORS

R4608, R4670, R4696		RS1/10S121J
R4601, R4644, R4645, R4658, R4686		RS1/10S151J
R4734, R4735		RS1/10S151J
R4630-R4632, R4643, R4675, R4681		RS1/16S75R0F
R4715-R4717, R4733, R4740-R4742		RS1/16S75R0F
R4602, R4603, R4605, R4610-R4612		RS1/16S###J
R4614-R4616, R4621-R4623, R4626		RS1/16S###J
R4635, R4636, R4639-R4641, R4646		RS1/16S###J
R4648-R4650, R4656, R4657, R4660		RS1/16S###J
R4661, R4662, R4664, R4665, R4667		RS1/16S###J
R4668, R4672, R4684, R4685, R4690		RS1/16S###J
R4691, R4693, R4694, R4697-R4699		RS1/16S###J
R4709-R4711, R4721, R4736, R4737		RS1/16S###J
R4738, R4739		RS1/16S###J
Other Resistors		RS1/16SS###J

OTHERS

JA4604	2P VERTICAL PIN JACK	AKB1331
JA4605	PINJACK	AKB1333
JA4601-JA4603	RGB CONNECTOR	AKP1295

[AV SW BLOCK]
SEMICONDUCTORS

IC4805		NJM12904V
IC4806		R2S11001FT
IC4804		R2S11002FT
Q4801, Q4802, Q4804-Q4806, Q4809		2SA1586
Q4818, Q4820, Q4822, Q4823		2SA1586
Q4812, Q4813, Q4817, Q4819		2SC4116
Q4814		DTA124EUA
Q4815		DTC124EUA
Q4807		HN1B04FU
D4802		1SS301
D4801		1SS355

CAPACITORS

C4916	(4.7/10)	ACG1122
C4821, C4835, C4871, C4875	(10/6.3)	ACG7046
C4877, C4880		CCSRCH181J50
C4859		CCSRCH331J50
C4861		CCSRCH680J50
C4885, C4888		CCSRCH681J50
C4822, C4862		CEHVKW101M6R3
C4802, C4805, C4806, C4808		CKSRYB105K10
C4813, C4814, C4820, C4833, C4834		CKSRYB105K10
C4836, C4838-C4841, C4847, C4848		CKSRYB105K10

Mark	No.	Description	Part No.
	C4850, C4851, C4878, C4879		CKSRYB105K10
	C4899-C4905		CKSRYB105K10
	C4837		CKSRYB474K10
	C4853-C4858, C4860, C4865		CKSSYB103K16
	C4869, C4870, C4890-C4893		CKSSYB103K16
	C4950-C4954		CKSSYB103K16
	C4807, C4809		CKSSYB104K10
	C4801, C4819, C4845, C4846, C4864		CKSSYF104Z16
	C4873, C4881, C4884, C4886, C4887		CKSSYF104Z16
	C4917-C4920, C4924, C4925		CKSSYF104Z16
	C4844, C4863, C4866, C4872, C4876		DCH1165
	C4882, C4883	(10/16)	DCH1165

RESISTORS

R4784, R4786		RS1/16S1800F
R4785, R4787, R4792, R4794, R4796		RS1/16S5600F
R4791, R4793, R4795		RS1/16S75R0F
R4857-R4860, R4944, R4985		RS1/16SS3301F
R4921, R4925-R4927, R4933, R4942		RS1/16S###J
R4943, R4950, R4954-R4956, R4965		RS1/16S###J
R4966, R4967, R4969		RS1/16S###J
Other Resistors		RS1/16SS###J

[IFUCOM BLOCK]
SEMICONDUCTORS

IC5002		HD64F3684FP
IC5003		PST9230N
IC5001		TC74VHC08FTS1
IC5004		TC7W126FU
Q5005		DTA124EUA

CAPACITORS

C5007, C5008		CCSSCH180J50
C5001		CEHVKW101M6R3
C5010		CKSSYB472K25
C5002-C5005, C5009, C5012		CKSSYF104Z16

RESISTORS

R5002, R5004, R5025, R5026		RAB4CQ103J
Other Resistors		RS1/16SS###J

OTHERS

X5002	(9.830MHz) CERAMIC	ASS1168
X5001	(32.768kHz) CRYSTAL	ASS1172

[MAINUCOM BLOCK]
SEMICONDUCTORS

IC5202		BR24L64F-W
IC5206		MB91305PMC-G-BND
IC5207		MBM29DL162TE70TN
IC5209		PQ200WNA1ZPH
IC5213		PST3610UR
IC5212		PST3616UR
IC5203, IC5211		PST3628UR
IC5201, IC5204		TC74VHC125FTS1
Q5202		2SJ461A
Q5204		DTC124EUA
Q5201, Q5203		SM6K2
D5203		1SS355
D5201		SML-311UT

CAPACITORS

C5235		CCSRCH221J50

Mark No.	Description	Part No.
C5244, C5245		CCSSCH120J50
C5217, C5218, C5240, C5241		CCSSCH470J50
C5246-C5251		CCSSCH470J50
C5238		CEHVKW100M35
C5201		CEHVKW101M6R3
C5256, C5263		CKSSYB102K50
C5216, C5233		CKSSYB103K16
C5215		CKSSYB472K25
C5202-C5214, C5219, C5222-C5232		CKSSYF104Z16
C5234, C5254, C5255, C5257-C5260		CKSSYF104Z16
C5236 (10/16)		DCH1165
RESISTORS		
R5262, R5268 (330/1/16W)		ACN1248
R5205, R5213		RAB4CQ101J
R5283		RS1/16S1601F
R5282		RS1/16S3301F
R5273		RS1/16S8201F
R5246, R5248, R5249,		RS1/16S###J
R4943, R4950, R4954-R4956, R4965		RS1/16S###J
Other Resistors		RS1/16SS###J
OTHERS		
CN5202 50P CONNECTER		AKM1201
K5201, K5202 TEST PIN		AKX9002
X5201 (16MHz) CERAMIC		ASS1178
[TEXTUCOM BLOCK]		
SEMICONDUCTORS		
IC5403		K4S641632H-TC75
IC5404		S29AL016D70TFI010
IC5405		SDA6000
IC5407		TC74LCX541FTS1
IC5402		TC7SH04FUS1
IC5406		TC7W126FU
Q5401, Q5406		DTA124EUA
Q5403, Q5407		DTC124EUA
D5404		1SS355
D5401		UDZS12(B)
D5402		UDZS3R0(B)
D5403		UDZS3R9(B)
COILS AND FILTERS		
⚠F5402, F5403 EMI FILTER		CCG1162
CAPACITORS		
C5412, C5438, C5453 (10/6.3)		ACG7046
C5422, C5423		CCSSCH200J50
C5404		CKSSYB102K50
C5403		CKSSYB103K16
C5445		CKSSYB104K10
C5405, C5406, C5408, C5410, C5413		CKSSYF104Z16
C5416, C5418, C5420, C5425, C5427		CKSSYF104Z16
C5429-C5431, C5434, C5435, C5440		CKSSYF104Z16
C5442, C5446, C5449, C5451, C5454		CKSSYF104Z16
C5456, C5458, C5460, C5476		CKSSYF104Z16
RESISTORS		
R5409, R5432 (68/1/16W)		ACN1251
R5404, R5428, R5429, R5434, R5435 (47/1/16W)		BCN1067
R5439, R5457, R5476		RAB4CQ103J
R5460		RAB4CQ680J
Other Resistors		RS1/16SS###J
OTHERS		
X5401 (6.000MHz) CRYSTAL		ASS1193
[VDEC BLOCK]		
SEMICONDUCTORS		
IC6002		HY57V161610ETP-8
IC6003		UPD64015AGM-UEU
COILS AND FILTERS		
⚠F6001, F6002, F6010, F6011 EMI FILTER		CCG1162
CAPACITORS		
C6056, C6088 (10/6.3)		ACG7046
C6078, C6083		CCSSCH8R0D50
C6062, C6069, C6070, C6074, C6080		CKSSYB103K16
C6046, C6058, C6063, C6064		CKSSYB104K10
C6066, C6067, C6072, C6073		CKSSYB104K10
C6075-C6077, C6081, C6082		CKSSYB104K10
C6084, C6085		CKSSYB104K10
C6001-C6008, C6012-C6028		CKSSYF104Z16
C6031-C6045, C6047, C6048, C6065		CKSSYF104Z16
C6068, C6071, C6079		CKSSYF104Z16
RESISTORS		
R6010, R6068, R6072 (22/1/16W)		ACN1246
R6065, R6073 (47/1/16W)		BCN1067
R6007, R6030, R6071		RAB4CQ220J
R6063		RS1/16SS1001D
R6038, R6039, R6049		RS1/16SS2000F
R6054		RS1/16SS2201D
R6052		RS1/16SS6200D
R6003, R6009, R6011, R6046, R6047		RS1/16S###J
R6066, R6067		RS1/16S###J
Other Resistors		RS1/16SS###J
OTHERS		
X6002 (24.576MHz) CRYSTAL		ASS1191
[ADC BLOCK]		
SEMICONDUCTORS		
IC6201		AD9985KSTZ-110
COILS AND FILTERS		
⚠F6201, F6204 EMI FILTER		CCG1162
CAPACITORS		
C6205, C6209		CKSSYB104K10
C6207, C6210, C6218		CKSSYB473K16
C6202		CKSSYB822K16
C6201		CKSSYB823K10
C6203, C6204, C6206, C6208		CKSSYF104Z16
C6211, C6212, C6215-C6217		CKSSYF104Z16
C6222-C6224		CKSSYF104Z16
RESISTORS		
R6213, R6218, R6223 (47/1/16W)		BCN1067
R6202		RS1/16SS2701F
R6220		RS1/16S0R0J
Other Resistors		RS1/16SS###J

Mark No.	Description	Part No.
	[HDMI BLOCK]	
	SEMICONDUCTORS	
	IC6403	BR24L02FJ-W
	IC6405	PCM1754DBQ
	IC6404	SII9021CTU
	Q6416	2SA1586
	Q6414	DTA124EUA
	Q6415	DTC124EUA
	Q6405	HN1K02FU
	Q6404	RN1902
	D6408	DAN202U
	D6407	UDZS6R8(B)
	COILS AND FILTERS	
	⚠F6401 EMI FILTER	CCG1162
	CAPACITORS	
	C6491 (10/6.3)	ACG7046
	C6401, C6403, C6405, C6407, C6409	CCSSCH101J50
	C6419, C6426, C6428, C6430, C6432	CCSSCH101J50
	C6434, C6435, C6438, C6440, C6442	CCSSCH101J50
	C6444, C6446, C6448, C6449, C6454	CCSSCH101J50
	C6456, C6459, C6464, C6466, C6468	CCSSCH101J50
	C6470, C6472, C6474, C6476, C6478	CCSSCH101J50
	C6480, C6482	CCSSCH101J50
	C6462, C6463	CCSSCH120J50
	C6484	CEHVKW220M6R3
	C6402, C6404, C6406, C6408, C6410	CKSSYF104Z16
	C6412, C6414, C6416, C6418, C6420	CKSSYF104Z16
	C6422, C6423, C6427, C6429, C6431	CKSSYF104Z16
	C6433, C6436, C6437, C6439, C6441	CKSSYF104Z16
	C6443, C6445, C6447, C6450, C6451	CKSSYF104Z16
	C6455, C6457, C6458, C6460, C6461	CKSSYF104Z16
	C6465, C6467, C6469, C6471, C6473	CKSSYF104Z16
	C6475, C6477, C6479, C6481, C6483	CKSSYF104Z16
	C6490	CKSSYF104Z16
	RESISTORS	
	R6418, R6419, R6421 (22/1/16W)	ACN1246
	R6414	RAB4CQ100J
	R6465	RAB4CQ103J
	R6416	RAB4CQ220J
	R6438	RAB4CQ470J
	R6401, R6449	RS1/10S0R0J
	R6417	RS1/16S220J
	Other Resistors	RS1/16SS###J
	OTHERS	
	JA6402 HDMI CONNECTOR(VT)	AKP1294
	X6401 (28.322MHz) CRYSTAL	ASS1192
	[DSEL BLOCK]	
	SEMICONDUCTORS	
	IC6601	PD6523A
	IC6602	TC74LCX125FT
	IC6603	TC74VHC125FTS1
	COILS AND FILTERS	
	⚠F6628 CHIP BEADS FILTER	ATX1058
	⚠F6601-F6603 EMI FILTER	CCG1162
	CAPACITORS	
	C6632 (10/6.3)	ACG7046
	C6604	CCSRCH221J50
	C6631	CKSSYB102K50
	C6601-C6603, C6606-C6610	CKSSYF104Z16
	C6613-C6617, C6619, C6621-C6623	CKSSYF104Z16
	C6625-C6627, C6629, C6630	CKSSYF104Z16
	RESISTORS	
	R6603-R6605 (68/1/16W)	ACN1251
	R6611, R6614, R6618, R6653-R6655 (100/1/16W)	BCN1071
	R6613, R6620, R6652	RAB4CQ101J
	R6648, R6651	RS1/16S###J
	Other Resistors	RS1/16SS###J
	OTHERS	
	X6601 (100MHz) CRYSTAL	ASS1194
	[IP BLOCK]	
	SEMICONDUCTORS	
	IC6801, IC6802	K4S643232H-TC60
	IC6803	PE5504B
	COILS AND FILTERS	
	⚠L6801-L6804 CHIP BEADS FILTER	BTX1042
	CAPACITORS	
	C6801 (10/6.3)	ACG7046
	C6863	CKSSYB102K50
	C6802-C6809, C6811-C6822	CKSSYF104Z16
	C6824-C6831, C6833-C6862	CKSSYF104Z16
	RESISTORS	
	R6833, R6838 (22/1/16W)	ACN1246
	R6841, R6844-R6847 (68/1/16W)	ACN1251
	R6813, R6814, R6816, R6820, R6821	BCN1067
	R6823, R6825, R6827, R6828 (47/1/16W)	BCN1067
	R6818 (100/1/16W)	BCN1071
	R6832	RAB4CQ101J
	R6817	RAB4CQ470J
	Other Resistors	RS1/16SS###J
	[MULTI BLOCK]	
	SEMICONDUCTORS	
	IC7001	PEG121B
	IC7002	S29JL032H70TFI21
	IC7004	TC74VHC08FTS1
	IC7005	TC74VHC125FTS1
	COILS AND FILTERS	
	⚠F7001-F7005 EMI FILTER	CCG1162
	CAPACITORS	
	C7052	CKSSYB102K50
	C7006-C7021, C7023-C7034	CKSSYF104Z16
	C7036-C7050, C7054	CKSSYF104Z16
	RESISTORS	
	R7011, R7013, R7024, R7032, R7036 (22/1/16W)	ACN1246
	R7062-R7064 (47/1/16W)	BCN1067
	R7015, R7023	RAB4CQ101J
	R7016, R7018, R7070	RAB4CQ103J
	R7060	RAB4CQ470J
	Other Resistors	RS1/16SS###J

Mark No.	Description	Part No.

AUDIO ASSY

SEMICONDUCTORS

	IC3754	BR24L02FJ-W
	IC3751	LA4625
	IC3753	NJW1183GK1
	IC3752	PQ09DZ11
	Q3751, Q3754, Q3755, Q3757	2SA1586
	Q3756, Q3759	2SC4116
	Q3758, Q3760	DTC124EUA
	D3751	1SS355

COILS AND FILTERS

⚠	L3901, L3902 LINE FILTER	ATF1206

CAPACITORS

	C3917, C3918 (1.5/63)	ACH1420
	C3756 (1/25)	BCG1060
	C3765, C3768	CCSRCH101J50
⚠	C3906, C3908, C3914, C3916	CCSRCH101J50
	C3901, C3902, C3909, C3910	CCSRCH221J50
	C3775, C3777, C3788, C3790, C3791	CEHAT100M50
	C3799	CEHAT100M50
	C3761, C3764, C3786, C3798	CEHAT101M16
	C3766, C3780, C3783-C3785, C3797	CEHAT1R0M50
	C3808, C3812, C3814	CEHAT1R0M50
	C3762	CEHAT220M50
	C3752, C3753	CEHAT2R2M50
	C3759	CEHAT331M16
	C3757	CEHAT471M25
	C3755	CEHAT472M25
	C3763	CEHAT4R7M50
	C3754, C3805	CFTLA103J50
	C3767, C3770, C3772-C3774	CFTLA104J50
	C3781, C3782, C3789, C3792-C3795	CFTLA104J50
	C3806, C3807, C3813	CFTLA104J50
	C3811	CFTLA223J50
	C3778	CFTLA334J50
	C3758, C3760, C3796	CKSRYB103K50
	C3769, C3815	CKSRYB222K50
	C3903, C3911	CKSRYB332K50
	C3779	CKSRYB822K50
	C3816	CKSRYF104Z16
	C3904, C3912	CKSRYF473Z50

RESISTORS

	R3901-R3904	RD1/2MMF100J
	R3768-R3770, R3782	RD1/2MMF2R2J
	Other Resistors	RS1/16S###J

OTHERS

	CN3751 CONNECTOR	B3P-VH
	CN3901 8P TOP POST	B8B-EH
	3772, 3773 SCREW	PMB30P100FNI
	3774, 3775 SCREW	VBB30P100FNI
	KN3751, KN3752 WRAPPING TERMINAL	VNF1084

SR ASSY

SEMICONDUCTORS

	IC7601	MAX3232CPW
	Q7608	HN1B04FU
	TH7601	TH05-3H103F

CAPACITORS

	C7608	CEHVKW100M16
	C7601	CKSRYB103K50
	C7603-C7607, C7614	CKSSYF104Z16

RESISTORS

	R7626	RS1/16S4701F
	R7602-R7605	RS1/16SS###J
	Other Resistors	RS1/16S###J

OTHERS

	CN7602 9P D-SUB SOCKET	AKP1213
	7602 SCREW TERMINAL	VNE1949

TUNER ASSY

SEMICONDUCTORS

	IC4401	MSP3417G
	Q4402	2SC4116
	Q4410, Q4415	DTC124EUA
	Q4407, Q4408	HN1A01FU
	Q4409	HN1C01FU
	D4403	UDZS8R2(B)

COILS AND FILTERS

	L4401-L4403 CHIP COIL	BTH1119
	L4405, L4406	LCTAW150J2520
	L4407	LCTAW4R7J2520
	L4404	LCTAW8R2J2520
	F4401, F4402	VTF1080

SWITCHES AND RELAYS

	S4401	ASG1100

CAPACITORS

	C4404, C4407, C4415, C4429 (10/6.3)	ACG7046
	C4424 (3.3/50)	ACH1385
	C4449	CCSRCH680J50
	C4442	CCSRCJ3R0C50
	C4417, C4418	CCSSCH100D50
	C4450	CCSSCH121J50
	C4456	CCSSCH181J50
	C4448	CCSSCH470J50
	C4428, C4443	CCSSCH560J50
	C4441	CCSSCH5R0D50
	C4409, C4423	CEHVKW100M16
	C4421	CEHVKW101M6R3
	C4422	CEHVKW470M16
	C4411, C4413	CKSRYF104Z50
	C4403, C4406, C4410, C4430, C4440	CKSSYB102K50
	C4444, C4455, C4461	CKSSYB102K50
	C4408, C4439, C4446	CKSSYB103K16
	C4438, C4454	CKSSYB472K25
	C4402, C4405, C4425, C4426, C4432	CKSSYF104Z16
	C4434, C4435, C4447, C4451, C4460	CKSSYF104Z16
	C4465	CKSSYF104Z16
	C4414, C4437, C4445 (10/16)	DCH1165

RESISTORS

	R4407-R4409, R4431, R4441, R4443	RS1/16S###J
	R4446, R4451, R4455-R4457, R4461	RS1/16S###J
	R4462	RS1/16S###J

Mark	No.	Description	Part No.
		Other Resistors	RS1/16SS###J
		OTHERS	
	CN4401	40P CONNECTER	AKM1217
	X4401	CRYSTAL(18.432MHZ)	ASS1196

FRONT ASSY

SEMICONDUCTORS

	D7801-D7803	UDZS5R1(B)
	D7804, D7805	UDZS9R1(B)

COILS AND FILTERS

	L7801, L7802	LCTAW1R0J2520

CAPACITORS

	C7803, C7804	CKSRYB103K50
	C7805, C7808, C7809, C7813	CKSRYB105K10
	C7801	CKSRYB473K16
⚠	C7839, C7840	CKSSYB102K50
	C7802	CKSSYF104Z16

RESISTORS

	R7801, R7803, R7809	RS1/16S75R0F
	R7802, R7863, R7867	RS1/16SS###J

OTHERS

	JA7803 PIN JACK(3P)	AKB1303
	CN7804 40P CONNECTER	AKM1217
	JA7801 4P MINIDIN SOCKET(S)	AKP1238

LED ASSY

SEMICONDUCTORS

	Q8002, Q8003	DTA143EUA
	Q8004, Q8005	DTC143EUA
	Q8001	RN2902
	D8001, D8002	SML-310DT
	D8003	SML-311UT
	D8004	SML512BC4T

CAPACITORS

	C8002-C8007, C8009	CCSSCH101J50
	C8001, C8008	CKSSYF104Z16

RESISTORS

	R8002, R8018	RS1/16SS###J
	Other Resistors	RS1/16S###J

IR ASSY

SEMICONDUCTORS

	Q8401	2SA1586
	D8401	1SS302

CAPACITORS

	C8401 (47/6.3)	ACH1357
	C8402	CKSRYB103K50
	C8403	CKSSYB102K50
	C8404	CKSSYF104Z16

RESISTORS

	R8401, R8403, R8404	RS1/16SS###J
	Other Resistors	RS1/16S###J

Mark	No.	Description	Part No.
		OTHERS	
	CN8401	L-PLUG(3P)	KM200NA3L

KEY ASSY

SWITCHES AND RELAYS

	S8451-S8456	VSG1024

CAPACITORS

	C8451-C8453	CCSRCH101J50

RESISTORS

	Other Resistors	RS1/16S###J

PANEL SENSOR ASSY

SEMICONDUCTORS

	Q8602	HN1B04FU
	TH8601	TH05-3H103F

CAPACITORS

	C8606, C8607	CKSRYB103K50

RESISTORS

	R8607	RS1/16S4701F
	Other Resistors	RS1/16S###J

SUB POWER ASSY

SEMICONDUCTORS

	IC7501, IC7502	M5291FP
	Q7501	2SD1664
	Q7502	2SD1898
	D7502	D1FL20U(S)
	D7503	RB160M-30

COILS AND FILTERS

	L7501 INDUCTOR	ATH1124
	L7503 INDUCTOR	ATH1197

CAPACITORS

	C7505 (47/50)	ACH1390
	C7502, C7522 (100/16)	ACH1394
	C7501, C7507	CCSRCH221J50
	C7510	CCSRCH681J50
	C7504	CCSRCH821J50
	C7520, C7523	CEHAT471M10
	C7518	CEHAT471M6R3
	C7521	CEHVKW101M6R3
	C7503, C7509	CKSRYB103K50
	C7515-C7517, C7519, C7524, C7525	CKSRYB104K16
	C7513	CKSRYF104Z50

RESISTORS

	R7510, R7517, R7520 (1.20/1/2W)	ACN1163
	R7501	RS1/10S1R5J
	R7513	RS1/16S1001F
	R7503	RS1/16S1101F
	R7514	RS1/16S3301F
	R7504	RS1/16S3302F
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.

OB DIGITAL ASSY

[DIGITAL IF BLOCK]

SEMICONDUCTORS

Q3001		DTC124EUA

COILS AND FILTERS

F3001-F3003		ATF1213

RESISTORS

R3010-R3015, R3024-R3029		RAB4C101J
R3007		RAB4C470J
Other Resistors		RS1/16SS###J

OTHERS

CN3002	CONNECTOR	AKM1294
CN3001	50P CONNECTER AU	AKM1346

[MODULE UCOM BLOCK]

SEMICONDUCTORS

IC3156	BR24L04FJ-W
IC3151	M30620FCPGP-U5C
IC3157	M62334FP
IC3155	SN74AHC08PW
IC3152, IC3153	SN74AHC541PW
IC3160	TC74VHC123AFTS1
IC3159	TC7W126FU
Q3152	2SC4081
Q3151	2SJ461A
D3158, D3159, D3161	1SS355
D3153	DA204U
D3151, D3152, D3154, D3155, D3162	DAN202U

CAPACITORS

C3164, C3178, C3179	CCSSCH101J50
C3151, C3169	CEHVKW470M6R3
C3167	CKSRYB103K50
C3159, C3171, C3172	CKSRYB105K10
C3154	CKSSYB102K50
C3152, C3153, C3155-C3158	CKSSYF104Z16
C3162, C3163, C3165, C3166, C3168	CKSSYF104Z16
C3170, C3176, C3177	CKSSYF104Z16

RESISTORS

R3160, R3171, R3176	RAB4C101J
R3174	RAB4C103J
Other Resistors	RS1/16SS###J

OTHERS

CN3151	CONNECTOR	AKM1289
X3151	(16 MHz) CERAMIC	ASS1178

[PANEL FLASH BLOCK]

SEMICONDUCTORS

IC3301	MBM29PL160TD75TN
IC3304	PST3610UR
IC3302, IC3305	PST3628UR
IC3303	SN74AHC08PW
Q3302	HN1C01FU
Q3301	RN1901

CAPACITORS

C3311	CCSRCH470J50
C3317	CCSRCH471J50
C3315	CKSRYB104K16
C3304, C3307, C3309	CKSRYB472K50
C3305, C3310	CKSSYB102K50
C3301-C3303, C3306, C3308, C3316	CKSSYF104Z16

RESISTORS

Other Resistors	RS1/16SS###J

OTHERS

X3302	(102.5 MHz) CRYSTAL	ASS1188

[ASTRA BLOCK]

SEMICONDUCTORS

IC3401	PEG122C

COILS AND FILTERS

F3401, F3402	EMI FILTER	CCG1162
L3401-L3403		QTL1013

CAPACITORS

C3401, C3402, C3419, C3425	CEHVKW101M6R3
C3403-C3413, C3417, C3418	CKSSYF104Z16
C3420-C3424, C3426-C3432	CKSSYF104Z16
C3445-C3452	CKSSYF104Z16

RESISTORS

R3402, R3412	RAB4C101J
R3405-R3407, R3409, R3410	RAB4C220J
R3416, R3417	RAB4C220J
R3425	RS1/16S5601F
Other Resistors	RS1/16SS###J

[ADDRESS BLOCK]

SEMICONDUCTORS

D3501, D3502	DAN202U

CAPACITORS

C3501-C3504	CKSSYB102K50

RESISTORS

R3521, R3522, R3525	RAB4C101J
R3524	RAB4C222J
R3519, R3520	RAB4C472J
Other Resistors	RS1/16SS###J

OTHERS

CN3501-CN3504, CN3506	40P CONNECTER	AKM1217
CN3505	CONNECTOR	CKS4914

[DIGITAL DD CON BLOCK]

SEMICONDUCTORS

IC3601	BA80BC0WFP
Q3605	DTC124EUA

CAPACITORS

C3612	ACH1394
C3611	CKSQYB105K16
C3613	CKSRYB103K50
C3609	CKSSYF104Z16

Mark	No.	Description	Part No.
		RESISTORS	
	R3611		RAB4C101J
	R3624, R3626		RS1/16S###J
A	Other Resistors		RS1/16SS###J
		OTHERS	
	U3601	DD CON UNIT	AXY1118

43 ADDRESS ASSY

[43 ADR LOGIC BLOCK]

		SEMICONDUCTORS	
	IC1501		PEE002A
B		**COILS AND FILTERS**	
	L1504	CHIP SOLIDD INDUCTOR	QTL1013
		CAPACITORS	
	C1501,C1502		CKSRYB105K6R3
	C1509,C1510		CKSSYB102K50
	C1503-C1507,C1552-C1555		CKSSYF104Z16
		RESISTORS	
	R1505-R1509		RS1/16SS1000F
	R1530,R1531		RS1/16S0R0J
	Other Resistors		RS1/16SS###J
C		**OTHERS**	
	CN1501	40P CONNECTOR	AKM1217
	CN1502	PH CONNECTOR 4P	AKM1290

[43 ADR RESONANCE BLOCK]

		SEMICONDUCTORS	
	IC1601,IC1602		TND307TD
	Q1612		2SA1163
	Q1607,Q1609		HAT1110R
	Q1601,Q1610		HAT3021R
D	Q1606,Q1608,Q1611		QSZ2
	Q1615		RN1901
	D1612		1SS302
	D1625,D1628		1SS355
	D1602,D1603,D1605,D1606		EC10UA20
	D1607-D1610		EP05FA20
	D1601,D1611,D1620,D1622		UDZS15(B)
		COILS AND FILTERS	
	L1601,L1604	INDUCTOR	ATH1135
E		**CAPACITORS**	
	C1609 (0.1U/100V)		ACG1098
	C1620,C1621 (330P/100V)		ACG1105
	C1601,C1614 (0.1U/100V)		ACG1124
	C1602,C1604 (56U/80V)		ACH1422
	C1613		CKSRYB104K25
	C1619		CKSYB105K16
		RESISTORS	
	R1601,R1617		RS1/16S4702F
	Other Resistors		RS1/16S###J
F	Other Resistors		RS1/16SS###J

Mark	No.	Description	Part No.

43 SCAN A ASSY

		SEMICONDUCTORS	
	IC2701-IC2706		SN755870PZT
	IC2707		TC7SH08FUS1
	D2701-D2705		1SS355
		CAPACITORS	
	C2701,C2711,C2721 (0.1U/250V)		ACG1088
	C2731,C2741,C2751 (0.1U/250V)		ACG1088
	C2710,C2720,C2730,C2740,C2750		CCSRCH181J50
	C2760		CCSRCH181J50
	C2708,C2709,C2718,C2719		CCSRCH331J50
	C2728,C2729,C2738,C2739		CCSRCH331J50
	C2748,C2749,C2758,C2759		CCSRCH331J50
	C2705-C2707,C2715-C2717		CCSRCH390J50
	C2725-C2727,C2735-C2737		CCSRCH390J50
	C2745-C2747,C2755-C2757		CCSRCH390J50
	C2703,C2713,C2723,C2733,C2743		CKSRYB105K6R3
	C2753,C2761		CKSRYB105K6R3
		RESISTORS	
	R2705,R2710,R2713,R2716,R2719		RAB4C221J
	R2722		RAB4C221J
	Other Resistors		RS1/16S###J
		OTHERS	
	CN2702	PH CONNECTOR 3P	AKM1274
	CN2701	13P BRIDGE CONNECTOR	AKP1261

43 SCAN B ASSY

		SEMICONDUCTORS	
	IC2801-IC2806		SN755870PZT
	IC2807		TC7SH08FUS1
	D2801-D2805		1SS355
		CAPACITORS	
	C2801,C2811,C2821 (0.1U/250V)		ACG1088
	C2831,C2841,C2851 (0.1U/250V)		ACG1088
	C2810,C2820,C2830,C2840,C2850		CCSRCH181J50
	C2860		CCSRCH181J50
	C2808,C2809,C2818,C2819		CCSRCH331J50
	C2828,C2829,C2838,C2839		CCSRCH331J50
	C2848,C2849,C2858,C2859		CCSRCH331J50
	C2805-C2807,C2815-C2817		CCSRCH390J50
	C2825-C2827,C2835-C2837		CCSRCH390J50
	C2845-C2847,C2855-C2857		CCSRCH390J50
	C2803,C2813,C2823,C2833,C2843		CKSRYB105K6R3
	C2853,C2861		CKSRYB105K6R3
		RESISTORS	
	R2803,R2808,R2811,R2814,R2817		RAB4C221J
	R2820		RAB4C221J
	Other Resistors		RS1/16S###J
		OTHERS	
	CN2802	PH CONNECTOR 3P	AKM1274
	CN2801	13P BRIDGE CONNECTOR	AKP1261

43 X DRIVE ASSY

		OTHERS	
	1002	DRIVE RADIATION SHEET	AEH1092
	1001	DRIVE HEATSINK X	ANH1637

Mark No.	Description	Part No.
1002	DRIVE HEATSINK K	ANH1639
1001	SCREW	BMZ30P080FTC

[X LOGIC BLOCK]

SEMICONDUCTORS

IC1001		TC74ACT541FT
IC1002		TC74VHC00FTS1

CAPACITORS

C1003		CEHAT470M16
C1001,C1002		CKSRYB104K16

RESISTORS

R1001,R1003		RAB4C470J
R1008,R1009		RAB4C472J
Other Resistors		RS1/16S###J

OTHERS

CN1001	18P FFC CONNECTOR	VKN1310

[X RESONANCE BLOCK]

SEMICONDUCTORS

IC1101		AXF1145
IC1141		BA10393F
Q1141		2SC4116
D1101-D1105		D1FL40

COILS AND FILTERS

L1101,L1102	CHOKE COIL	ATH1155
L1103-L1106	CHOKE COIL	ATH1193

CAPACITORS

C1106-C1110		ACE1178
C1101,C1112,C1113 (0.22U/250V)		ACG1112
C1121 (470P/630V)		ACG1126
C1167,C1168 (3300P/630V)		ACG1129
C1105		CCG1186
C1141,C1142,C1144,C1145		CKSRYB104K16
C1102,C1146		CKSRYB105K6R3
C1103		CKSYB105K25

RESISTORS

R1101		ACN1168
R1142,R1146		RS1/10S1003F
R1122,R1123		RS1/10S104J
R1148,R1150		RS1/16S5601F
R1151,R1155		RS1/16S6801F
R1106,R1121		RS2MMF100J
Other Resistors		RS1/16S###J

[X SUS BLOCK]

SEMICONDUCTORS

IC1202		AXF1143
IC1201		MM1565AF
IC1252		PS9117
IC1251		TND301S
IC1271		TND307TD
Q1251		2SC2412K
Q1272		2SK3325-Z
D1281		1SS302
D1201		1SS355
D1252		CRH01
D1282		UDZS16(B)
D1251		UDZS5R6(B)

COILS AND FILTERS

L1204,L1211	INDUCTOR	ATH1186
F1201	INDUCTOR	CTF1449
L1201,L1205,L1231		LFEA100J

CAPACITORS

C1214-C1217		ACE1178
C1297,C1298 (3300P/630V)		ACG1129
C1212,C1213		ACH1424
C1231		CEHAT101M10
C1206		CEHAT101M25
C1283		CEHAT2R2M2E
C1208		CEHAT470M16
C1222,C1272		CEHAT470M25
C1221		CKSRYB105K6R3
C1204,C1207,C1223,C1251,C1253		CKSRYF104Z50
C1273		CKSRYF104Z50
C1220		CKSYB105K25

RESISTORS

R1204		ACN1166
R1213		ACN1168
R1276,R1277		RS3LMF470J
Other Resistors		RS1/16S###J

OTHERS

KN1201-KN1206	GROUND PLATE	ANK-142
KN1208-KN1211	GROUND PLATE	ANK-142
CN1202	6P TOP POST	B6B-EH
CN1201	8P TOP POST	B8B-EH

[X D-D CON BLOCK]

SEMICONDUCTORS

IC1321		PS2701A-1(L)
IC1326		TA76431FR
Q1324		2SA1037K
Q1302		2SC4081
Q1301,Q1323		2SD1898
Q1321,Q1325,Q1351		HN1C01FU
D1303,D1324		1SS301
D1304,D1307,D1325,D1328		1SS355
D1301,D1302,D1326,D1327		CRH01
D1321		D1FK60
D1329,D1330		UDZS4R7(B)
D1306,D1323,D1331		UDZS5R1(B)

COILS AND FILTERS

⚠T1301	SWITCHING TRANS.	ATK1159
⚠T1321	SWITCHING TRANS.	ATK1160

CAPACITORS

C1325		ACH1428
C1326		CEHAT100M50
C1302,C1321		CEHAT101M25
C1301,C1303,C1323		CKSRYB103K50
C1304,C1306,C1327		CKSRYB104K16
C1307,C1324		CKSYB105K25

Mark No.	Description	Part No.
	RESISTORS	
	R1337	RAB4C472J
A	R1321,R1322,R1326,R1339	RS1/10S224J
	VR1321	CCP1392
	Other Resistors	RS1/16S###J
	SUS CLAMP 1 ASSY	
	SEMICONDUCTORS	
	D1631	DF20L60U
	CAPACITORS	
	C1632	ACE1179
	OTHERS	
B	KN1632 GROUND PLATE	ANK-142
	CN1631 3P TOP POST	B3B-EH
	KN1631 WRAPPING TERMINAL	VNF1084
	SUS CLAMP 2 ASSY	
	SEMICONDUCTORS	
	D1641	DF20L60U
	CAPACITORS	
	C1642	ACE1179
	OTHERS	
	KN1642 GROUND PLATE	ANK-142
C	CN1641 3P TOP POST	B3B-EH
	KN1641 WRAPPING TERMINAL	VNF1084
	43 Y DRIVE ASSY	
	OTHERS	
	2001 DRIVE RADIATION SHEET	AEH1092
	2001 CONDUCTIVE PLATE Y	ANG2832
	2001 DRIVE HEATSINK Y	ANH1638
	2002 DRIVE HEATSINK K	ANH1639
	2002 SCREW	BMZ30P080FTC
D		
	2001 SCREW	PMB30P060FTC
	[Y LOGIC BLOCK]	
	SEMICONDUCTORS	
	IC2002	TC74ACT540FT
	IC2001,IC2004	TC74ACT541FT
	IC2003,IC2005	TC74VHC08FTS1
	CAPACITORS	
	C2003	CEHAT470M16
E	C2001,C2002,C2004-C2006	CKSSYB104K10
	RESISTORS	
	R2003,R2006	RAB4C101J
	R2001,R2002,R2017,R2021	RAB4C470J
	R2004,R2005,R2019,R2020	RAB4C472J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN2001 40P CONNECTOR	AKM1217
	[Y RESONANCE BLOCK]	
F	**SEMICONDUCTORS**	
	IC2101	AXF1145
	IC2141	BA10393F

Mark No.	Description	Part No.
	Q2141	2SC4081
	D2101-D2105	D1FL40
	COILS AND FILTERS	
	L2101,L2102 CHOKE COIL	ATH1155
	L2103-L2106 CHOKE COIL	ATH1193
	CAPACITORS	
	C2131-C2134,C2136	ACE1178
	C2103,C2107,C2108 (0.22UF/250V)	ACG1112
	C2104,C2106 (470P/630V)	ACG1126
	C2109-C2112 (3300P/630V)	ACG1129
	C2101,C2145	CKSRYB105K6R3
	C2141,C2143,C2144	CKSSYB104K10
	C2102	CKSYB105K25
	RESISTORS	
	R2101	ACN1174
	R2108	ACN1241
	R2142,R2143	RS1/10S1003F
	R2103,R2107	RS1/10S104J
	R2146,R2149	RS1/16S5601F
	R2147,R2151	RS1/16S6801F
	R2102	RS2MMF100J
	Other Resistors	RS1/16S###J
	[Y SUS BLOCK]	
	SEMICONDUCTORS	
	IC2252,IC2253	AXF1144
	IC2350	MM1565AF
	IC2250	PS9117
	IC2231,IC2251	TND301S
	IC2203,IC2221	TND307TD
	Q2202	2SA2142
	Q2250	2SC4081
	Q2290	2SK3050
	Q2221	2SK3325-Z
	Q2280,Q2281	2SK3399
	D2233	1SS301
	D2213	1SS302
	D2203,D2212,D2351	1SS355
	D2202,D2204,D2205,D2234	CRH01
	D2251,D2252,D2272	CRH01
	D2211	D1FK60
	D2232,D2271	UDZS16(B)
	D2250	UDZS5R6(B)
	COILS AND FILTERS	
	L2353 INDUCTOR	ATH1186
	F2301-F2320 FERRITE BEAD	ATX1055
	F2352 INDUCTOR	CTF1449
	L2350,L2351,L2354	LFEA100J
	CAPACITORS	
	C2330,C2335,C2341,C2342	ACE1178
	C2231 (0.33U/100V)	ACG1118
	C2271,C2272 (0.1U/100V)	ACG1124
	C2336,C2337	ACH1424
	C2270	ACH1426
	C2226	ACH1427
	C2203-C2206	CCG1186

Mark No.	Description	Part No.
C2207		CCSRCH102J50
C2355,C2369		CEHAT101M10
C2357		CEHAT470M16
C2208,C2221,C2339,C2364		CEHAT470M25
C2356		CKSRYB104K16
C2353,C2358,C2359		CKSRYB105K6R3
C2363		CKSRYB473K16
C2209,C2222,C2230,C2252		CKSRYF104Z50
C2250		CKSSYB104K10
C2354,C2360		CKSYB105K25
RESISTORS		
R2352		ACN1166
R2304		ACN1174
R2360,R2362		ACN1178
R2210,R2211		RS1/10S151J
R2290		RS1MMF331J
R2222,R2224		RS2MMF5R6J
R2203		RS3LMF821J
R2277-R2279,R2281		RS3LMF8R2J
Other Resistors		RS1/16S###J
OTHERS		
KN2350,KN2352	GROUND PLATE	ANK-142
KN2354	GROUND PLATE	ANK-142
KN2356,KN2357	GROUND PLATE	ANK-142
KN2359-KN2363	GROUND PLATE	ANK-142
CN2351,CN2352	KR CONNECTOR	B4B-PH-K
CN2350	9P TOP POST	B9B-EH
[Y SCAN BLOCK]		
SEMICONDUCTORS		
IC2403,IC2405,IC2406,IC2408		PS9117
IC2401		PS9851-2(P)
IC2409,IC2410		PST3638UR
IC2402,IC2407		TC74ACT540FT
D2402		CRH01
COILS AND FILTERS		
F2401-F2404	CHIP FERRITE BEAD	ATX1059
L2401-L2403		LFEA100J
CAPACITORS		
C2404,C2411		ACH1406
C2401,C2407,C2414		CEHAT101M10
C2416,C2417		CKSRYB102K50
C2402,C2403,C2405,C2408-C2410		CKSSYB104K10
C2412		CKSSYB104K10
RESISTORS		
R2407,R2421		RAB4C220J
Other Resistors		RS1/16S###J
OTHERS		
CN2401,CN2402		AKM1200
15P BRIDGE CONNECTOR		AKM1200
[Y VH D-D CON BLOCK]		
SEMICONDUCTORS		
IC2531		BA10358F
IC2502		MIP2E3DMC
IC2503		PS2701A-1(L)
IC2534,IC2535		TA76431FR
Q2533		2SC2412K

Mark No.	Description	Part No.
Q2531		2SC3425
Q2532		2SD2568
Q2511		HN1C01FU
D2534		1SS355
D2522,D2524		CRH01
D2523,D2532		D1FK60
D2533		UDZS33(B)
D2536		UDZS4R7(B)
D2530,D2531		UDZS8R2(B)
COILS AND FILTERS		
⚠T2503	CONVERTER TRANS.	ATK1158
L2501		LFEA101J
CAPACITORS		
C2531		ACE1177
C2516		ACH1360
C2532		ACH1425
C2513		ACH1428
C2520		CEHAT101M16
C2515		CEHAT101M25
C2528		CEHAT221M16
C2514,C2525,C2534		CKSRYB104K16
C2521,C2533,C2535		CKSRYB104K25
RESISTORS		
R2553		RAB4C472J
R2558		RS1/10S0R0J
R2533,R2556		RS1/10S104J
R2534,R2535,R2541		RS1/10S2203F
R2548		RS1/16S1003F
R2550		RS1/16S1802F
R2549,R2557		RS1/16S4702F
R2542,R2545		RS1/16S5601F
VR2503		CCP1390
VR2531		CCP1392
Other Resistors		RS1/16S###J
[Y D-D CON BLOCK]		
SEMICONDUCTORS		
IC2602		BA10358F
IC2601,IC2603,IC2606		PS2701A-1(L)
IC2605,IC2614		TA76431FR
Q2610		2SA1163
Q2601,Q2609		2SA1576A
Q2608		2SA2005
Q2607		2SC2713
Q2612		2SC4081
Q2605,Q2606		2SD1898
Q2603,Q2604,Q2611		DTC143EUA
Q2602,Q2613,Q2641		HN1C01FU
D2611		1SS226
D2604,D2612		1SS301
D2602,D2613-D2615		1SS355
D2601,D2603,D2609,D2618		CRH01
D2610		D1FL40
D2617		UDZS15(B)
D2607,D2608		UDZS4R7(B)
D2605		UDZS5R1(B)
D2616		UDZS5R6(B)

Mark	No.	Description	Part No.
		COILS AND FILTERS	
⚠	T2602	CONVERTER TRANS.	ATK1156
⚠	T2601	SWITCHING TRANS.	ATK1161
		CAPACITORS	
	C2608,C2610		CEHAT101M25
	C2613		CEHAT221M25
	C2606		CEHAT221M6R3
	C2607		CKSRYB102K50
	C2605,C2612,C2614		CKSRYB103K50
	C2601,C2604,C2609		CKSRYB104K16
	C2602,C2615		CKSRYB105K6R3
	C2603		CKSRYF104Z50
	C2611		CKSSYB104K10
		RESISTORS	
	R2613		RAB4C472J
	R2641,R2642		RS1/10S224J
	R2629		RS1/16S1002F
	R2625,R2626		RS1/16S1501F
	R2608,R2612,R2630,R2632,R2635		RS1/16S4701F
	R2618		RS1/16S4702F
	R2636		RS1/16S5601F
	R2652		RS1/16S6801F
	R2627		RS3LMF151J
	VR2601		CCP1390
	Other Resistors		RS1/16S###J

POWER SUPPLY UNIT

POWER SUPPLY Unit has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
OB DIGITAL Assy	➡	Writing of backup data is required. Refer to the "7.1.5 BACKUP WHEN THE PANEL UNIT IS ADJUSTED. "
43 X DRIVE Assy	➡	No adjustment required
43 Y DRIVE Assy	➡	No adjustment required
Service Panel	➡	Refer to the "6.6 METHOD FOR REPLACING THE SERVICE PANEL ASSY."
OBE MAIN assy	➡	No adjustment required
R06 D-TUNER Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

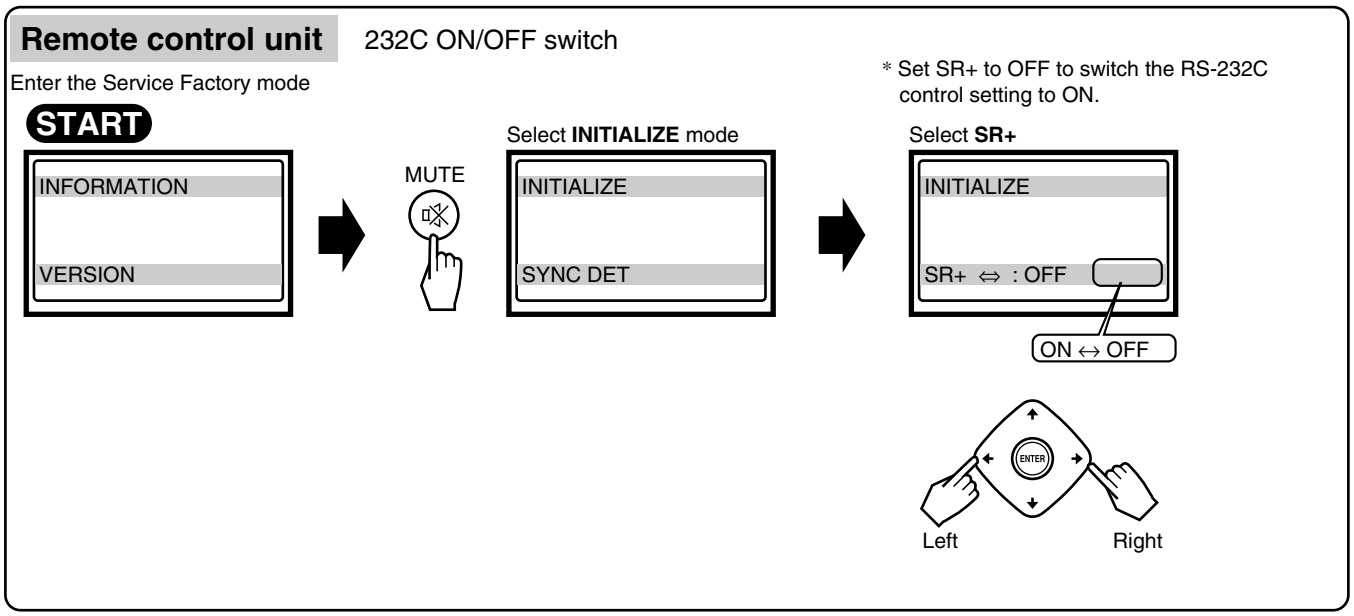
■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
OB DIGITAL Assy	➡	No adjustment required
43 X DRIVE Assy	➡	No adjustment required
43 Y DRIVE Assy	➡	No adjustment required
OBE MAIN Assy	➡	Replacement of components IC4804, IC4806, IC5202, IC5207, IC6003 and IC6201 on the circuitboard can cause malfunction and /or failure. If replacement is necessary, the assembly must be replaced.
R06 D-TUNER Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

6.2 USING RS-232C COMMANDS

The circuitry for the PDP-436SXE/RXE is as shown in the figure below, and activation/deactivation (ON/OFF) of RS-232C control is selectable. As OFF is selected at shipment, to enable RS-232C control when servicing, it is necessary to switch the setting to ON.

● How to switch the RS-232C control setting to ON by Service Factory Mode



● How to switch the RS-232C control setting to ON by Remote Control unit

[To Switch RS-232C control to ON]

Hold the **VOLUME** ◿+ or ◿− key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C.
The path is switched to that for RS-232C control. The baud rate becomes 9,600 bps.

[To Switch RS-232C control to OFF]

Hold the **VOLUME** ◿+ or ◿− key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **HOME MUNU** key on the remote control unit to set to RS-232C.
The path is switched to that for SR+, and RS-232C control becomes OFF.

[TIPS]

** During IF Standby (once 10 seconds or more has passed after the LED goes dark during communication), the first keypress may not be accepted. In such a case, for a key operation, first press any key other than the POWER key and CH keys, then the desired key.*

Note: For switching the RS-232C control setting, use the remote control unit supplied with the PDP-436XDE, etc., because the 2-Screen key (for multiscreen) is not provided with the remote control unit supplied with the PDP-436SXE/RXE.

6.3 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

How to enter Service Factory Mode

While in Standby mode, follow the below procedure with the remote control to enter Service Factory mode.

1. Press the [DISPLAY] key.
2. 3 second counter will start.
3. After 3 second, press [LEFT] key.
   (If no operation is done within 10 seconds, the Service Factory routine is cleared, and the standby mode is returned.)
4. 5 second counter will start. The Service Factory is up and ready.
5. Before 5 second counter ends, press [UP] key.
6. Before 5 second counter ends, press [LEFT] key.
7. Before 5 second counter ends, press [RIGHT] key.
8. Before 5 second counter ends, press [POWER] key.
9. If the procedure is correct within the counting time, the Service Factory Mode starts.

* During step 3 to 8, if other opeartion is done, the Service Factory routine is cleared.
* If the counting time is over up, the normal standby mode is returned.

Operation in Service Factory Mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- FREEZE
- Mask Control
- ORBITER (Operating at center value)

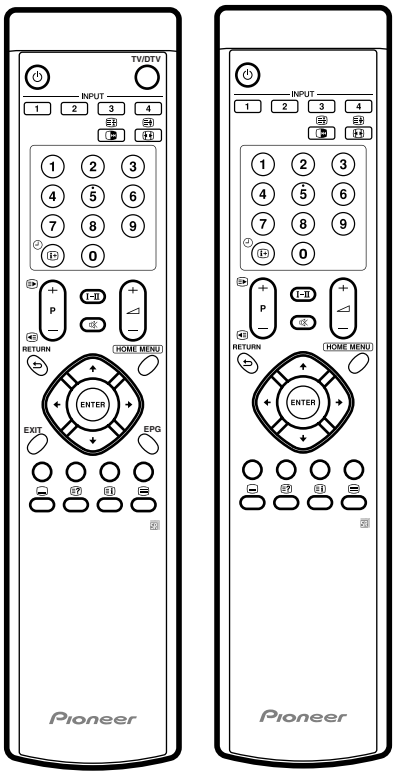
● User data

User data will be treated as follows:

- User data on picture- and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Factory mode, the current audio-quality adjustment data will still be retained in memory.
- As to data on various settings, user data will be applied to the items that are associated with signal format change (screen size switching, etc.).
- Data on screen (i.e., screen position, and not including data on screen size) are reset to the default values (data stored in memory will be retained). Screen size will be retained.

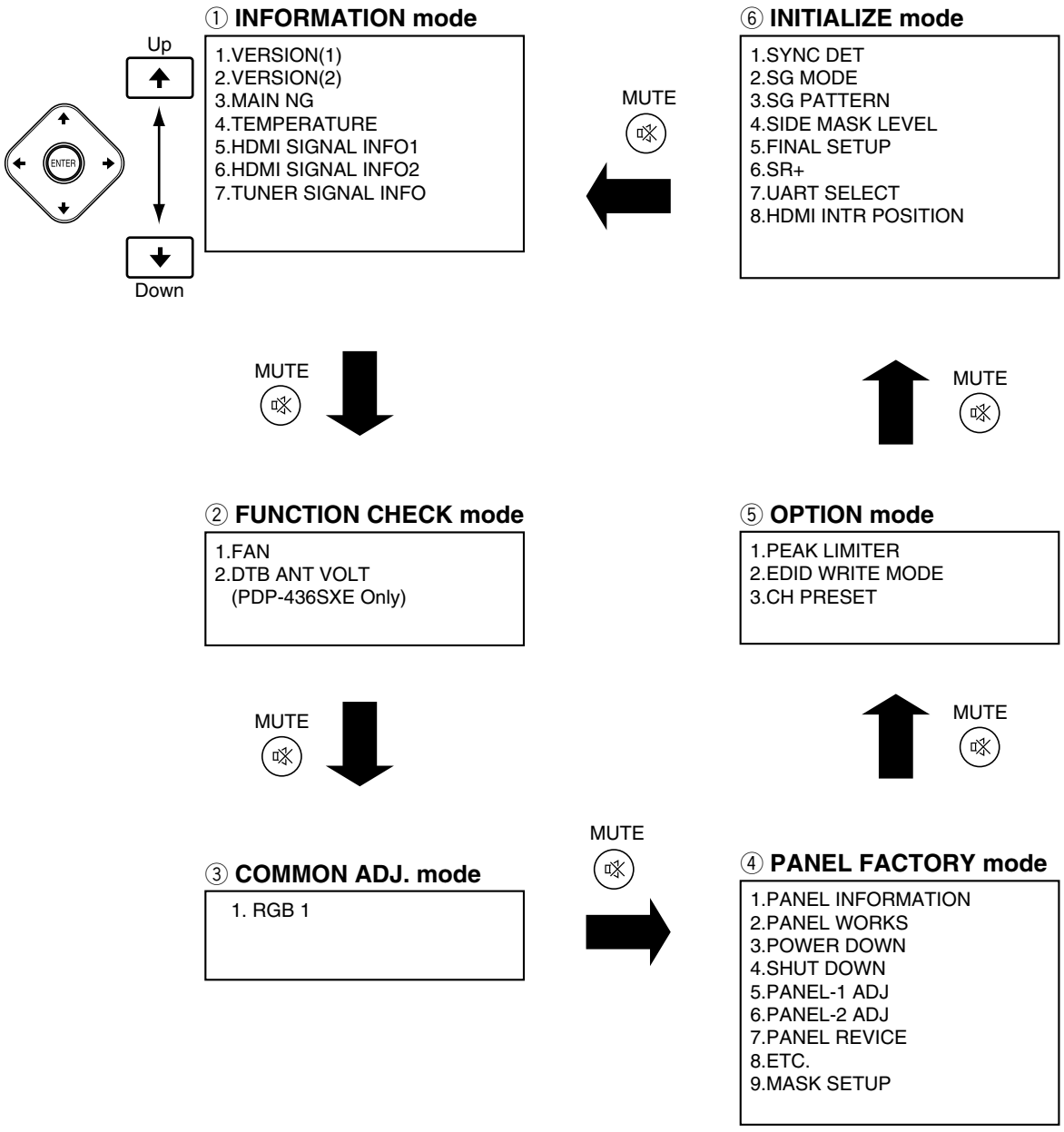
Remote control codes in Service Factory mode

SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item (top)
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on

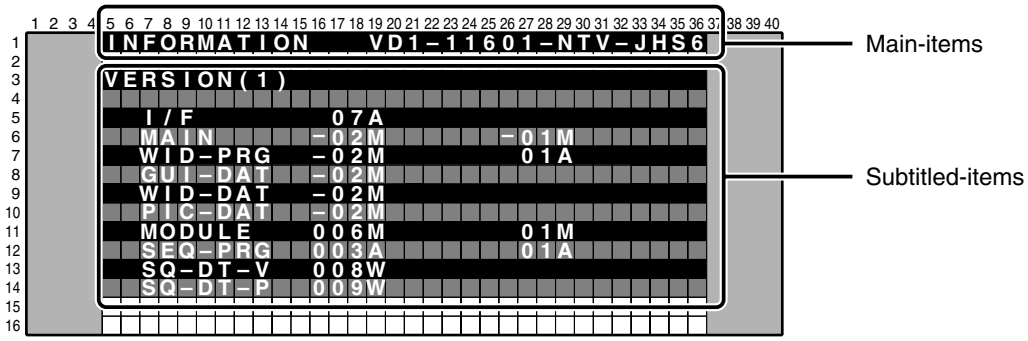


PDP-436SXE (AXD1515) **PDP-436RXE (AXD1516)**

Changes of the Service Factory menus

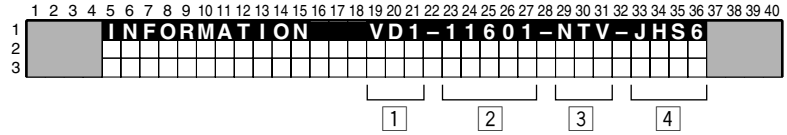


Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
INPUT 1- 4	AV 1 - 4
Analogue Tuner	AIR
Digital Tuner	ARD

Note : ARD IS PDP-436SXE ONLY.

4 Option (Destination, etc.)

Options	On-Screen Display
Advanced : PDP-436SXE	EHB6
Basic : PDP-436RXE	EBB6

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display	Color System and Signal Type		On-Screen Display
NTSC	Composite input	NTV	NTSC	S-connector input	NTS
PAL		PLV	PAL		PLS
PAL N		PNV	PAL N		PNS
PAL M		PMV	PAL M		PMS
SECAM		SCV	SECAM		SCS
4.43NTSC		4NV	4.43NTSC		4NS
BLACK/WHITE		BWV	BLACK/WHITE		BWS
Y / CB / CR		CBR	RGB		RGB
Y / PB / PR		PBR	Digital video signal		DIG

● SIG-Mode Table

The signal mode is displayed in four charecters:

1st and 2nd charecters : Resolutin of the input signal (numerics for the video signals, and alphabetics for the PC signals)
3rd and 4th charecters : Grouping of the V frequencies (refresh rate)
5th charecter : Selection of the screen size by the user is displayed.

SIG-Mode table for video signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.625
	60	SDTV*525i	60.000	15.750
12	60	SDTV*525i (PAL60)	60.000	15.750
20	50	SDTV*625p	50.000	31.250
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	28.125
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	37.500
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000

Selection of the screen size by the user is displayed.

5th	Description on GUI
1	4:3
2	FULL(FULL1)
3	ZOOM
4	CINEMA
5	WIDE
6	FULL 14:9
7	CINEMA 14:9
8	FULL2

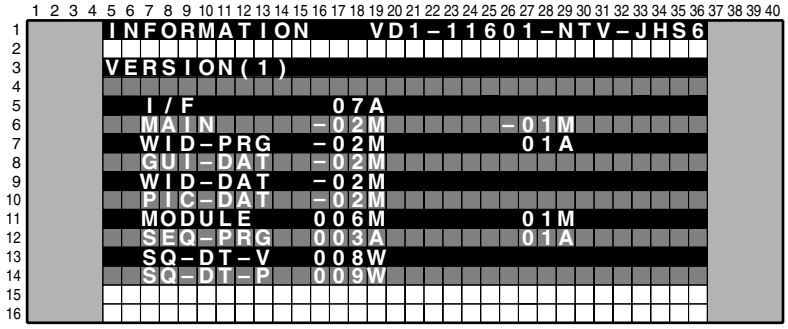
■ Factory Menus

① INFORMATION mode

● Operation items

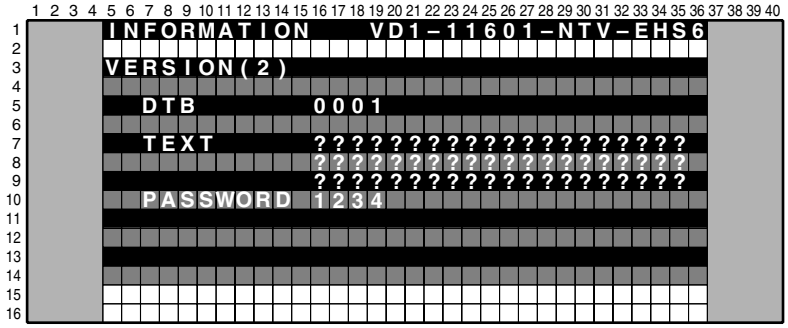
No.	Function / Display	Content	RS-232C
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)	QS1
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)	QS6
3	MAIN NG	The shutdown detected on Main u-com and its time of occurrence are displayed.	QNG
4	TEMPERATURE	Information of temperature and fan status on the set are displayed.	QMT
5	HDMI SIGNAL INFO 1	The file information of HDMI series are displayed.	–
6	HDMI SIGNAL INFO 2		–
7	TUNER SIGNAL INFO	The signal information on TUNER is displayed.	–

1. VERSION (1)



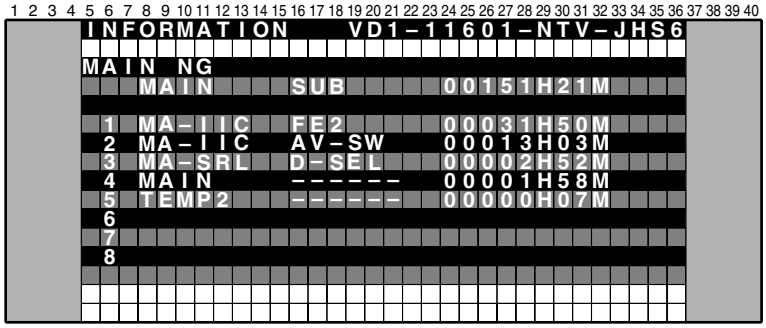
Flash memory on Device	On-Screen Display
IF microcomputer	I/F
Main microcomputer	MAIN
Program for CARRERA-MANTA	WID-PRG
GUI data for CARRERA-MANTA	GUI-DAT
Enhanced data for CARRERA-MANTA.	WID-DAT
Picture Quality data forCARRERA-MANTA	PIC-DAT
Module microcomputer(for the PDP)	MODULE
Program for ASTRA-MANTA(for the PDP)	SEQ-PRG
Sequence data for ASTRA-MANTA Video	SQ-DT-V
Sequence data for ASTRA-MANTA PC	SQ-DT-P

2. VERSION (2)



Device	On - Screen Display	Version Display	Remarks
DTB Software Version	DTB	4 character	PDP-436SXE only
Teletext ucom Software Version	TEXT	60 character	20 character x 3
User Password	PASSWORD	4 character	

3. MAIN NG

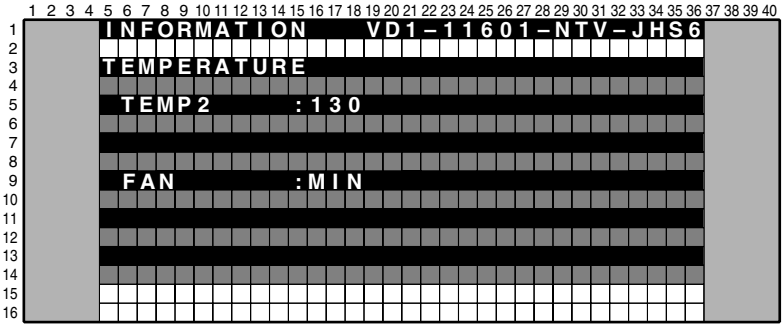


● Media Receiver NG information

OSD: MAIN	OSD: SUB	Cause of Shutdown
MODULE	----	Abnormality in Module microcomputer communication
MA-SRL		Abnormality in 3-wire Serial Communication of the Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI1	MANTA communication failure(MULIT1)
	I/P	MANTA communication failure(I/P)
	D-SEL	MANTA communication failure(D-SEL)
MA-IIC		Abnormality in Main microcomputer IIC communication
	FE1	Analog Tuner 1 (Front End 1)
	MPX	MPX
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	M-VDEC	Main VDEC
	ADC	AD/PLL
	HDMI	HDMI
	TX-COM	M2 Communication
	TX-BSY	M2 Busy
	MA-EEP	64k EEPROM
MAIN		Abnormality in Main microcomputer communication
FAN		Fan stopped
TEMP2		Abnormally high temperature
DTUNER (*)		Failure of the Digital Tuner
	PS/RST	Failure in DTB Starting
	RETRY	DTB communication failure
M-DCDC		Abnormality in ASIC power line (DC-DC)

*: PDP-436SXE only

4. TEMPERATURE

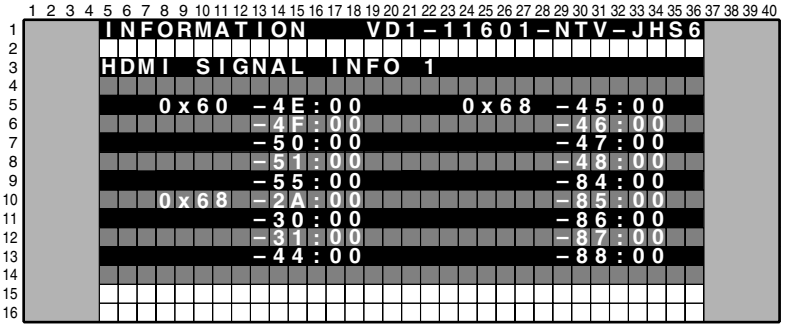


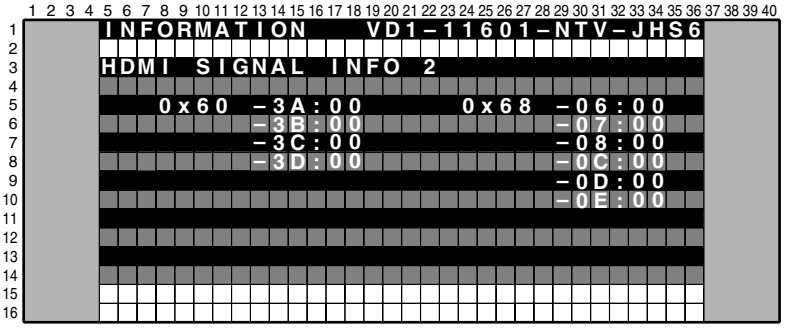
This displays the internal set temperature and fan rotating state.

TEMP2 : The value read from the temperature sensor is displayed in the range of 000-255. Sensor Temperature (°C) = -0.57 x TEMP2 + 120.33
(When the sensor temperature exceeds over 60°C, SD process stats.)

FAN : The value of the Fan rotating state is displayed.
STOP: stopped, MIN: slow speed, MAX: high speed

6. HDMI SIGNAL INFO



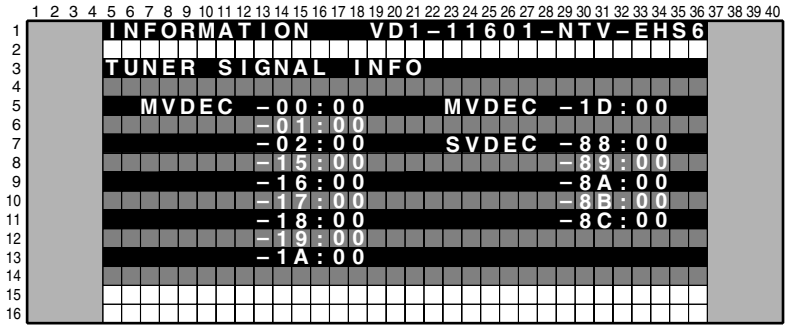


● **Technical examination display (Reading status registers in HDMI receiver and displaying them by HEX value.)**

HDMI SIGNAL INFO 1		
SA		**Context**
0x60	- 4E:	Video DE pixels [7:0]
	- 4F:	Video DE pixels [11:8]
	- 50:	Video DE lines [7:0]
	- 51:	Video DE lines [10:8]
	- 55:	Video status (interlace or progressive, sync polarity)
0x68	- 2A:	Audio in channel status (PCM, copy information etc.)
	- 30:	Audio in SPDIF channel status (sampling frequency)
	- 31:	Audio in SPDIF channel status (sample word length)
	- 44:	AVI InfoFrame data1 (video format etc.)
	- 45:	AVI InfoFrame data2 (colorimetry, aspect ratio)
	- 46:	AVI InfoFrame data3 (video scaling)
	- 47:	AVI InfoFrame data4 (video identification code)
	- 48:	AVI InfoFrame data5 (pixel repeat value for 2880dot)
	- 84:	Audio InfoFrame data1 (channel count, cording type)
	- 85:	Audio InfoFrame data2 (always zero)
	- 86:	Audio InfoFrame data3 (always zero)
	- 87:	Audio InfoFrame data4 (channel / speaker allocation)
	- 88:	Audio InfoFrame data5 (downmix inhibit, level shift value for downmixing)

HDMI SIGNAL INFO 2		
SA		**Context**
0x60	- 3A:	Video full H resolution [7:0]
	- 3B:	Video full H resolution [12:8]
	- 3C:	Video full V lines [7:0]
	- 3D:	Video full V lines [10:8]
0x68	- 06:	N Value for audio clock regeneration method. [7:0]
	- 07:	N Value for audio clock regeneration method. [15:8]
	- 08:	N Value for audio clock regeneration method. [19:16]
	- 0C:	CTS Value for audio clock regeneration method. [7:0]
	- 0D:	CTS Value for audio clock regeneration method. [15:8]
	- 0E:	CTS Value for audio clock regeneration method. [19:16]

7. TUNER SIGNAL INFO



● Tuner signal information in MVDEC / SVDEC.

Device	SA	Context
MVDEC	00h	Signal distinction 1
	01h	Signal distinction 2
	02h	Flag detection output
	15h	Noise level detection 1
	16h	Noise level detection 2
	17h	Non - standard signal detection
	18h	Subcarrier signal detection
	19h	ACC data output
	1Ah	ACC information output
	1Dh	Input signal mode
SVDEC	88h	Status register 1 (TV/VCR status)
	89h	Status register 2 (Macrovision detection etc)
	8Ah	Status register 3 (Front-end AGC gain value)
	8Bh	Status register 4 (Subcarrier to horizontal (SCH) phase)
	8Ch	Status register 5 (signal distinction)

② FUNCTION CHECK

● **Operation items**

No.	Display	Content	RS-232C
1	FAN <=>	Control FAN speed for Force.	–
2	DTB ANT VOLT <=>	Change the power supply voltage for DTB antenna.	–

③ COMMON ADJ. mode

RGB1

Only for the technical use.

④ PANEL FACTORY mode

● **Operation items**

No.	Function / Display	Summary Descuiption	RS - 232C
1	PANEL INFORMATION	Display DIGITAL Assy software version and backup state, etc.	–
2	PANEL WORKS	Display pulse meter and hour meter, etc.	–
3	POWER DOWN	Display power-down history.	–
4	SHUT DOWN	Display shut-down history Module u-com detecting	–
5	PANEL-1 ADJ (+)	Adjust sustain wave form and drive power.	–
6	PANEL-2 ADJ (+)	Adjust panel white balance and ABL.	–
7	PANEL REVICE (+)	Set the correction level for panel degradation.	–
8	ETC. (+)	Act as copying back-up data and cleaing various data.	–
9	MASK SETUP (+)	Display the asc screen.	–

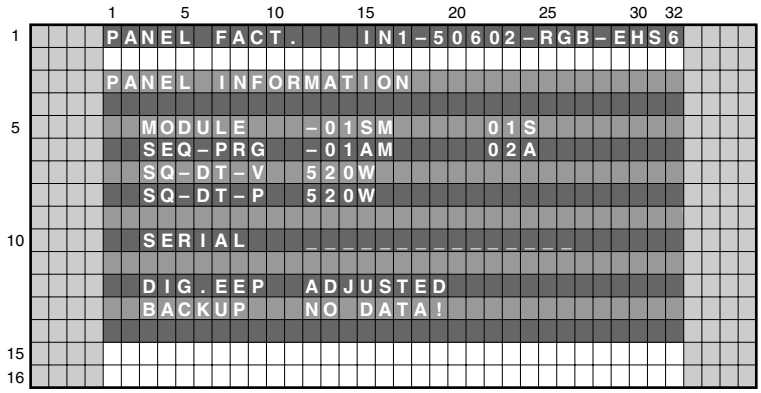
■ Configuration of Panel Factory mode

No.	Submode Name / Submode Items	Adjustable Range	Remarks
1	PANEL INFORMATION		
2	PANEL WORKS		
3	POWER DOWN		
4	SHUT DOWN		
5	PANEL-1 ADJ (+)		
5-1	X-SUS B <=>	120 to 136	Equivalent to XSB
5-2	Y-SUS B <=>	120 to 136	Equivalent to YSB
5-3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
5-4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5-5	XY-RST W <=>	120 to 136	Equivalent to RSW
5-6	VOL SUS <=>	000 to 255	Equivalent to VSU
5-7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
5-8	VOL RST P <=>	000 to 255	Equivalent to VRP
5-9	SUS FREQ. <=>	MODE1 to MODE8	Equivalent to SFR
6	PANEL-2 ADJ (+)		
6-1	R-HIGH <=>	000 to 511	Equivalent to PRH
6-2	G-HIGH <=>	000 to 511	Equivalent to PGH
6-3	B-HIGH <=>	000 to 511	Equivalent to PBH
6-4	R-LOW <=>	000 to 999	Equivalent to PRL
6-5	G-LOW <=>	000 to 999	Equivalent to PGL
6-6	B-LOW <=>	000 to 999	Equivalent to PBL
6-7	ABL <=>	000 to 255	Equivalent to ABL
7	PANEL REVISE		
7-1	R-LEVEL <=>	LV-0 to LV-7	Equivalent to RRL
7-2	G-LEVEL <=>	LV-0 to LV-7	Equivalent to RGL
7-3	B-LEVEL <=>	LV-0 to LV-7	Equivalent to RBL
8	ETC. (+)		
8-1	BACKUP DATA <=>	NO OPRT<=>TRANSFER or ERR	Equivalent to BCP
8-2	DIGITAL EEPROM <=>	NO OPRT<=>DELETE/REPAIR	Equivalent to FAJ/UAJ
8-3	PD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPD
8-4	SD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CSD
8-5	HR-MTR INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CHM
8-6	PM/B1-B5 <=>	NO OPRT <=>CLEAR	Equivalent to CPM
8-7	P COUNT INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPC
9	MASK SETUP (+)		
9-1	MASK OFF		Equivalent to MKS+S00
9-2	SGL MASK 01 <=>	<=>48V<=>50V<=>60V<=>60P<=>70P<=>72V<=>75V<=> (Select each sequence.)	Equivalent to MKS+S01
9-3	SGL MASK 02 <=>		Equivalent to MKS+S02
	• • •		• • •
9-62	CMB MASK 08 <=>		Equivalent to MKC+S08
9-63	CMB MASK 09 <=>		Equivalent to MKC+S09

■ Details on submodes related to the panel

The GUI display examples here are those displayed when the main unit is used with the 50-inch model.

1. PANEL INFORMATION

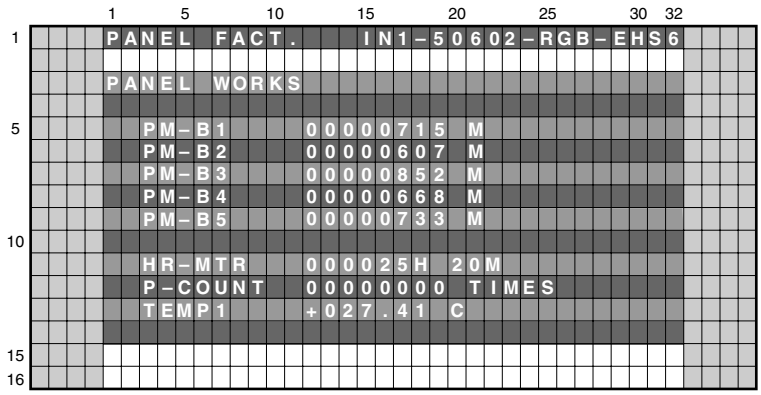


■ **Key operation**

<DOWN> : Shifting to PANEL WORKS
<UP> : Shifting to MASK SETUP (+)
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

The version of the microcomputer of the panel, serial number of the panel, adjustment states of the panel unit (OB DIGITAL ASSY), and backup status are displayed.

2. PANEL WORKS

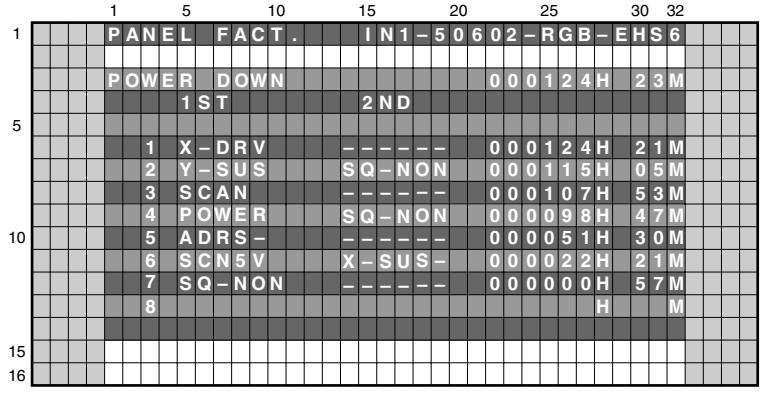


■ **Key operation**

<DOWN> : Shifting to POWER DOWN
<UP> : Shifting to PANEL INFORMATION
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

- The data from the pulse meter for each block from PM-B1 to PM-B5 are indicated. The values stored in the EEPROM (3 bytes each) are each converted into a decimal number, and the higher-order 8 digits are displayed (that means that the lowest-order digit represents millions).
- TEMP1: Indicates the temperature of the panel. By your pressing the L or R key, the temperature value can be updated.

3. POWER DOWN


PANEL FACT. IN1-50602-RGB-EHS6
POWER DOWN 000124H 23M
1ST 2ND
1 X-DRV ------ 000124H 21M
2 Y-SUS SQ-NON 000115H 05M
3 SCAN ------ 000107H 53M
4 POWER SQ-NON 000098H 47M
5 ADRS- ------ 000051H 30M
6 SCN5V X-SUS- 000022H 21M
7 SQ-NON ------ 000000H 57M
8 H M

■ Key operation

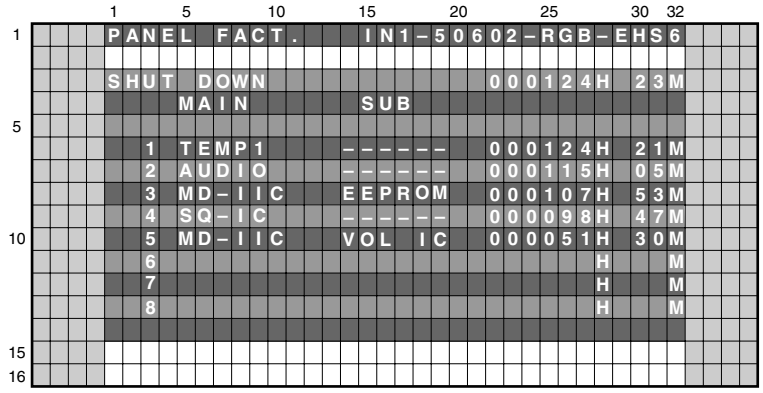
<DOWN> : Shifting to SHUTDOWN
<UP> : Shifting to PANEL WORKS
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

• Basically, data acquired with the command QPD are displayed in the columns "1ST" and "2ND, with the values from the hour meter when the power-down occurred.

<Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	X-DRIVE Assy	X-DRV
5V power for SCAN	SCN5V	DCDC for X drive	X-DCDC
Not used		X-SUS	X-SUS
DCDC for Y drive	Y-DCDC	Sequence drive stopped	SQ-NON
Y-SUS	Y-SUS	Specification inability	UNKNOW

4. SHUT DOWN


PANEL FACT. IN1-50602-RGB-EHS6
SHUT DOWN 000124H 23M
MAIN SUB
1 TEMP1 ------ 000124H 21M
2 AUDIO ------ 000115H 05M
3 MD-IIC EEPROM 000107H 53M
4 SQ-IC ------ 000098H 47M
5 MD-IIC VOL IC 000051H 30M
6 H M
7 H M
8 H M

■ Key operation

<DOWN> : Shifting to PANEL-2ADJ (+)
<UP> : Shifting to POWER DOWN
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

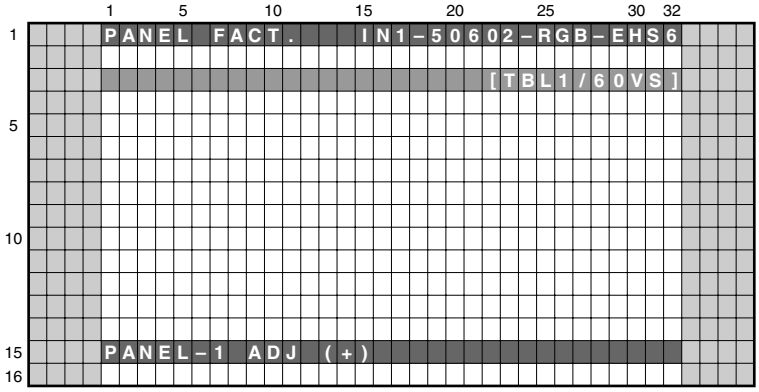
• Basically, data acquired with the command QSD (for MDU-IIC, subcategory data are also displayed) are displayed with the values from the hour meter when the shutdown occurred.

<Causes of shutdown and corresponding OSD indications>

Cause of shutdown (main)	OSD Indication
SEQUENCE PROCESSOR	SQ-IC
MDU-IIC	MDU-IIC (with subcategory)
Abnormality in RST2	RST2
Panel having high temperature	TEMP1
Short-circuited speaker	AUDIO

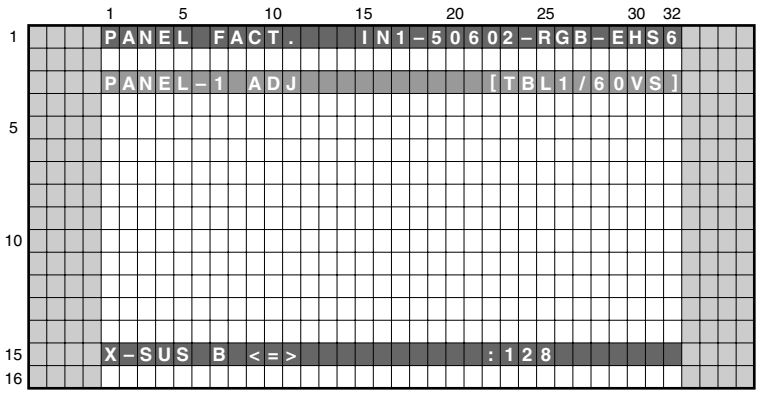
Cause of shutdown (sub)	OSD Indication
EEPROM	EEPROM (IC3156)
BACKUP	BACKUP (IC3754)
DAC	DAC (IC3302 to IC3304)
Audio IC	VOL-IC (IC3158)

5. PANEL-1 ADJ



■ Key operation

<DOWN> : Shifting to PANEL-2 ADJ (+)
<UP> : Shifting to POWER DOWN
<SET> : Shifting to the next nested layer
<SEL> : MASK ON/OFF



■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer
<SEL> : MASK ON/OFF

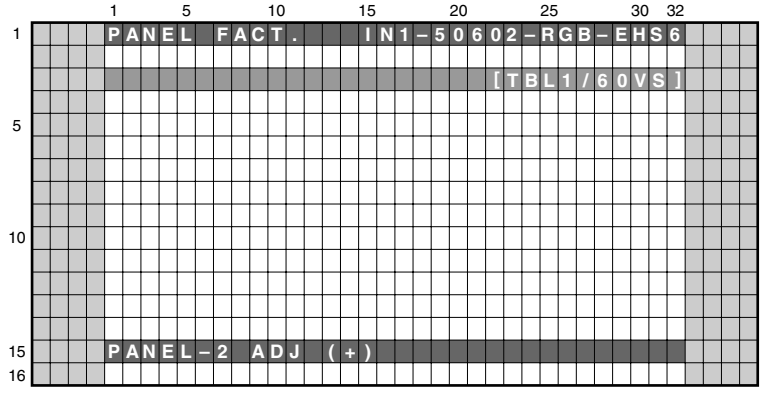
<Drive-sequence indications and indications for the ABL/WB tables>
(The OSD indications are displayed at the right part of the third line for submode PANEL-1 ADJ and subsequent submodes.)

Type of WB/ABL Tables		Type of Drive Sequences					
		Standard Video/MASK ON		Nonstandard Video		PC	
TBL1		48VS		---		60PS	Not used for consumer products
TBL2		50VS		50VN		70PS	
TBL3		60VS		60VN			
TBL4		72VS	Only Mask indication	---			
		75VS		75VN			

<Lower-layer items of PANEL-1 ADJ>

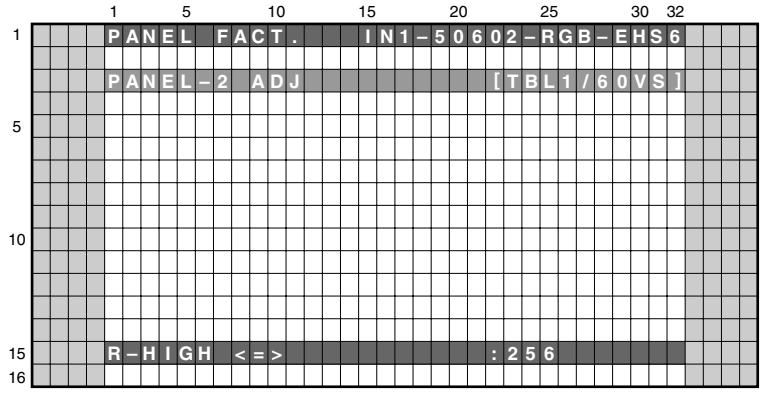
No.	Items	Adjustment/Setting Value	Remarks
1	X-SUS B <=>	120 to 136	Equivalent to XSB
2	Y-SUS B <=>	120 to 136	Equivalent to YSB
3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5	XY-RST W <=>	120 to 136	Equivalent to RSW
6	VOL SUS <=>	000 to 255	Equivalent to VSU
7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
8	VOL RST P <=>	000 to 255	Equivalent to VRP
9	SUS FREQ. <=>	<=>MODE1 to MODE8<=>	Equivalent to SFR

6. PANEL-2 ADJ



■ Key operation

<DOWN> : Shifting to PANEL REVISE
<UP> : Shifting to PANEL-1 ADJ (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



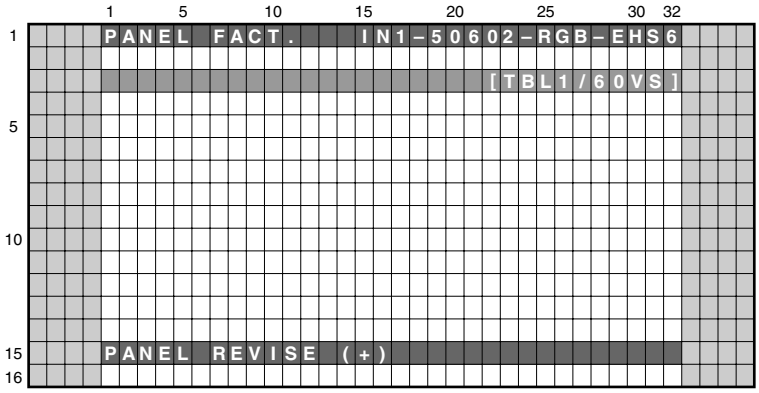
■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of PANEL-2 ADJ>

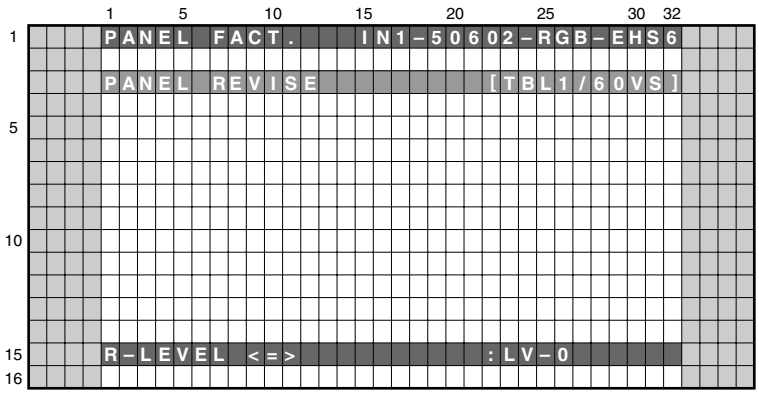
No.	Items	Adjustment/Setting Value	Remarks
1	R-HIGH <=>	000 to 511	Equivalent to PRH
2	G-HIGH <=>	000 to 511	Equivalent to PGH
3	B-HIGH <=>	000 to 511	Equivalent to PBH
4	R-LOW <=>	000 to 999	Equivalent to PRL
5	G-LOW <=>	000 to 999	Equivalent to PGL
6	B-LOW <=>	000 to 999	Equivalent to PBL
7	ABL <=>	000 to 255	Equivalent to ABL

7. PANEL REVISE



■ Key operation

<DOWN> : Shifting to ETC.(+)
<UP> : Shifting to PANEL-2 ADJ (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



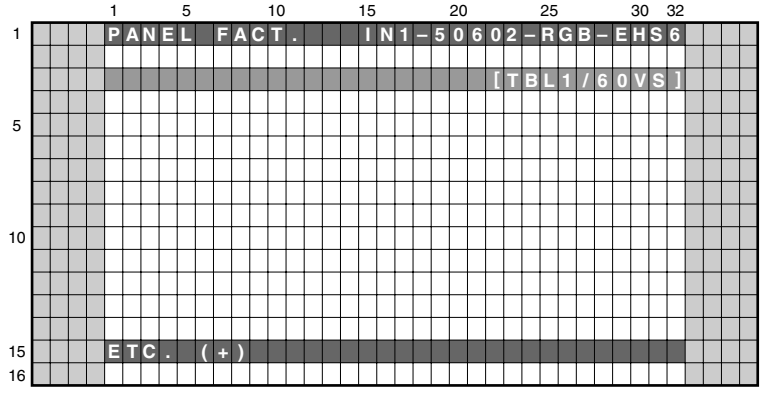
■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of PANEL REVISE>

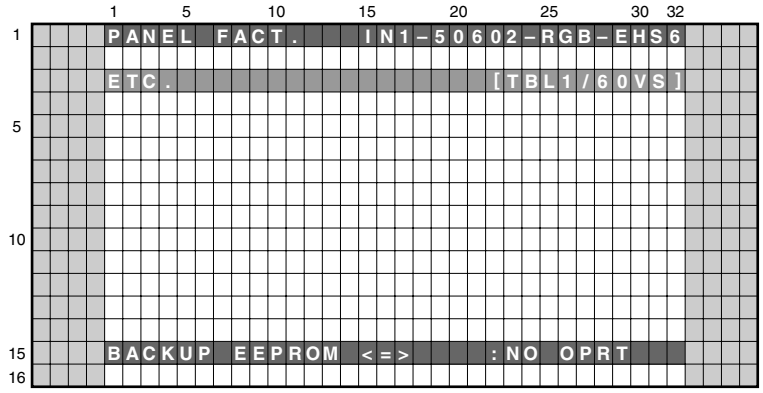
No.	Items	Adjustment/Setting Value	Remarks
1	R-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RRL
2	G-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RGL
3	B-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RBL

8. ETC.



■ Key operation

<DOWN> : Shifting to MASK SETUP (+)
<UP> : Shifting to PANEL REVISE (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



■ Key operation

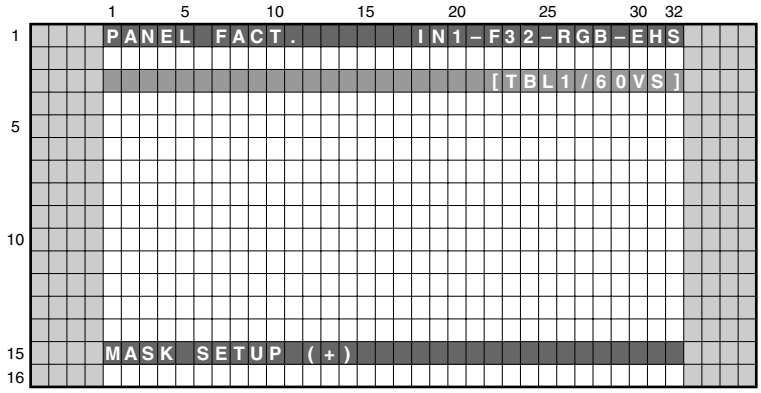
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of ETC.>

No.	Items	Adjustment/Setting Value	Remarks
1	BACKUP DATA <=>	<=>NO OPRT<=>TRANSFER<=>	"ERR" is indicated when no data are in the backup EEPROM. To activate the option to select TRANSFER, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
2	DIGITAL EEPROM <=>	<=>NO OPRT<=>REPAIR/DELETE<=>	"DELETE" is indicated when the panel unit has been already adjusted. To activate the option to select REPAIR/DELETE, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
3	PD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	To activate the option to select CLEAR, repeatedly press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
4	SD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
5	HR-MTR INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
6	PM/B1-B5 <=>	<=>NO OPRT<=>CLEAR<=>	
7	P-COUNT INFO. <=>	<=>NO OPRT<=>CLEAR<=>	

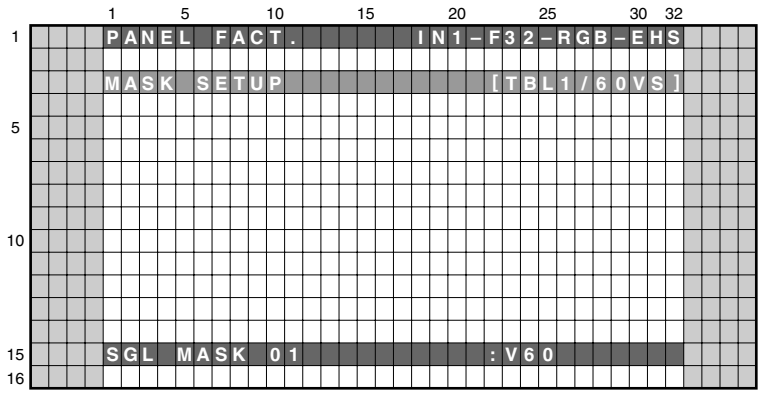
- "NO OPRT" is selected when this submode is entered (to avoid accidental misoperation).
- When each item is set, the process starts then the unit shifts to the upper layer. (When NO OPRT is determined, the unit will shift to the upper layer without doing anything.)
- When BACK UP DATA are set to be backed up, if the digital EEPROM has not been adjusted, LED operation becomes that RED LED lights + BLUE LED flashes (200ms).

9. MASK SETUP



■ **Key operation**

<DOWN> : Shifting to PANEL INFORMATION
<UP> : Shifting to ETC. (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



■ **Key operation**

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of MASK SETUP>

No.	Items	Adjustment/Setting Value	Remarks
1	MASK OFF		Equivalent to MKS+S00
2	SGL MASK 01 <=>	<=>48V<=>50V<=>60V<=> 60P<=>70P<=>72V<=>75V<=>	Equivalent to MKS+S01
3	SGL MASK 02 <=>		Equivalent to MKS+S02
4	• • •		• • •
5	CMB MASK 08 <=>		Equivalent to MKC+S08
6	CMB MASK 09 <=>		Equivalent to MKC+S09

• With the keys <LEFT> and <RIGHT>, the Panel drive sequence in the MASK indication is changed in the following way:
<=>48V<=>50V<=>60V<=>60P<=>70P<=>72V<=>75V<=>

⑤ OPTION mode

● **Operation items**

No.	Function/Display	Content	RS-232C
1	PEAK LIMITTER ⇔	Control Peak Limitter (Select ON/OFF)	–
2	EDID WRITE MODE ⇔	Control EDID WRITE MODE (Select DISABLE/ENABLE)	–
3	CH PRESET ⇔	USER ⇔ FACTORY	–

⑥ INITIALIZE mode

● **Operation items**

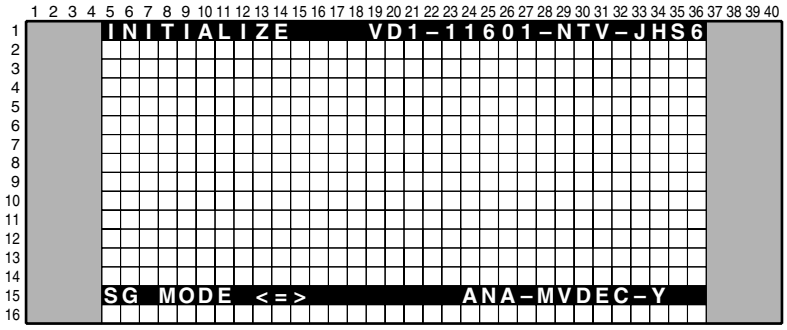
No.	Function/Display	Content	RS-232C
1	SYNC DET(+)	Only for the technical use.	–
2	SG MODE ⇔	Paired SG_MODE with SG_PATTERN. Select SG Route.	–
3	SG PATTERN ⇔	Paired SG_MODE with SG_PATTERN. Select SG Pattern.	–
4	SIDE MASK LEVEL(+)	Adjust Side Mask Color(R,G,B).	BSL GSL RSL
5	FINAL SETUP(+)	Initialize flash memories on virgin product status	FST
6	SR+ ⇔	Select SR+ mode or UART SELECT mode.	–
7	UART SELECT ⇔	Select boud Rate on RS-232C Communication	–
8	HDMI INTR POSITION(+)	Only for the technical use.	–

1. SYNC DET(+)

Only for the technical use.

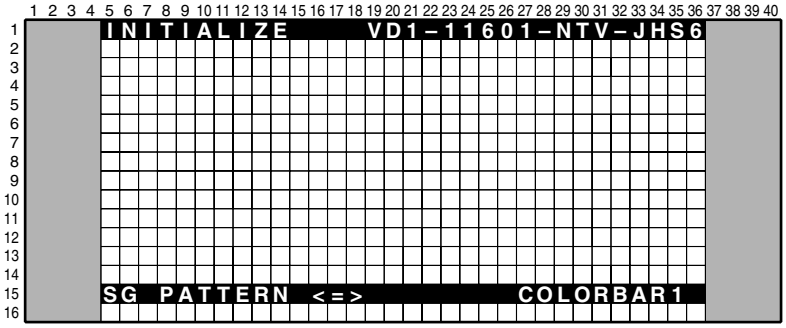
2. SG MODE

The route of the Test Signal from the MVDEC is chosen by this function.
After setting this function, SG pattern should be set.



No.	Display	Function
1	SG OFF	SG is set to OFF
2	DIG MVDEC YCBCR	Digital output (YCbCr)
3	ANA MVDEC Y	Analog output to the Videio SW (Y)
4	ANA MVDEC RGB	SCART
5	ANA AD YCBCR	Analog output to the RGB SW (YCbCr)
6	ANA AD RGB	Analog output to the RGB SW (RGB)

3. SG PATTERN

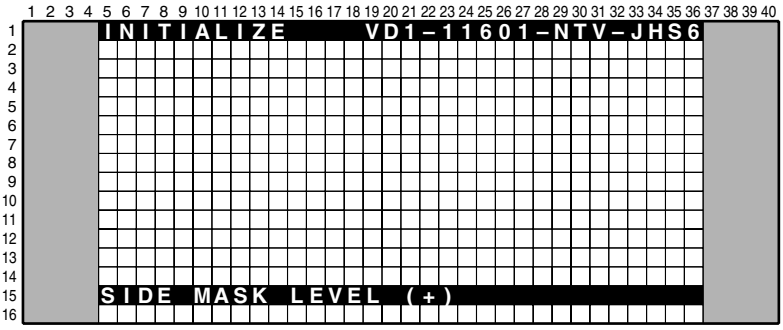


No.	Function/Display	SG Pattern (Brightness IRE Level/Color)	No.	Function/Display	SG Pattern (Brightness IRE Level/Color)
1	COLOR BAR1	Colorbar(75%)	11	RASTER4	Raster(75% Green)
2	COLOR BAR2	Colorbar(100%)	12	RASTER5	Raster(75% Magenta)
3	RAMP1	Ramp(100% white)	13	RASTER6	Raster(75% Red)
4	RAMP2	Ramp(100% Yellow)	14	RASTER7	Raster(75% Blue)
5	RAMP3	Ramp(75% Green)	15	RASTER8	Raster(-% Black)
6	RAMP4	Ramp(75% Red)	16	10STEP1	10STEP(100% white)
7	RAMP5	Ramp(75% Blue)	17	10STEP2	10STEP(100% Yellow)
8	RASTER1	Raster(100% White)	18	10STEP3	10STEP(75% Green)
9	RASTER2	Raster(75% Yellow)	19	10STEP4	10STEP(75% Red)
10	RASTER3	Raster(75% Cyanide)	20	10STEP5	10STEP(75% Blue)

Important notice of the Test Signal mode (SG mode, SG pattern)

- The route switching should be done correctly in the factory mode.
- Y or G signal from SG should be input to the AVI terminal of the MVDEC when the SG signal is output.
- The function of the blanking offset (50 IRE) should be OFF during the SG mode.
- The setting of the Y/C separation function should be set to the NTSC during the SG mode
- Only the RGB and Component signals can be output during SG mode, so only the Y signal is input at the CVBS and S signal mode, thus the picture is composed in black and white color. This isn't a trouble.
- The SG mode 5 (ANA AD RGB) is only for the factory mode. Therefore some probrem (strange color, unstable brightness etc.) might be happened.

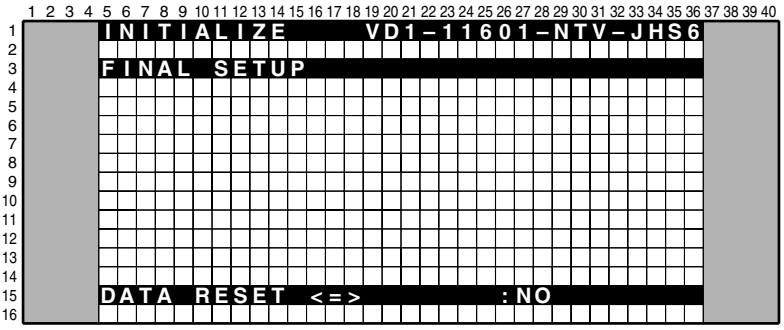
4. SIDE MASK LEVEL



Level of the side mask (R, G, and B) can be adjusted by using this menu.
The input signal is necessary to adjust it.

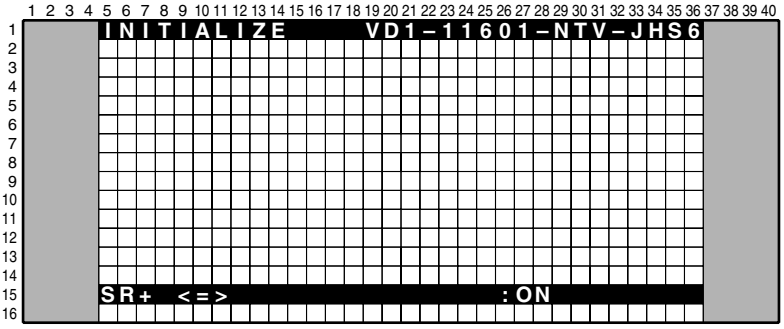
No.	Display	Context	RS-232C
1	R MASK LEVEL ⇔	Adjust Side Mask R (range :000-255)	RSL
2	G MASK LEVEL ⇔	Adjust Side Mask G (range :000-255)	GSL
3	B MASK LEVEL ⇔	Adjust Side Mask B (range :000-255)	BSL

5. FINAL SETUP



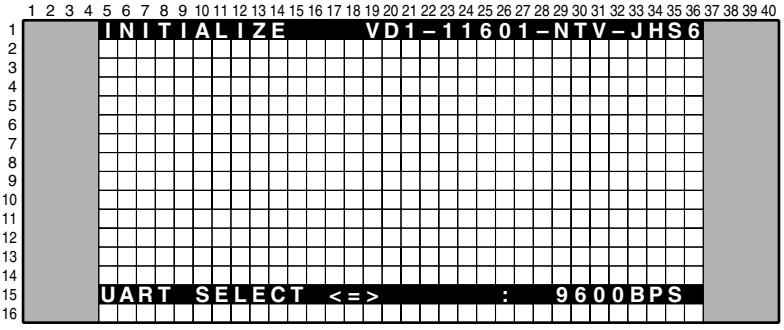
The value of all memorized data are set to shipment status. If the ENTER key is kept on pressing for 5 second when the status of this menu is YES, final setup will be done.

6. SR+



When using RS-232C function, select SR+ OFF.

7. UART SELECT



* The bau-rate for SXE/RXE model is not valiabe like XDE/FDE model, but 9600bps fixed.

6.4 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode. Before using RS-232C commands, it is necessary to change the factory presetting.
See "6.2 USING RS-232C COMMANDS".
[Note ; If you want to see version infomation (ex. QS1, QS6, Factory, Menu), Please see 10 seconds after starting.]

1. RS-232C command for Main microcomputer

Command	Operation	Remarks
B		
BSL	Adjust side mask B	
C		
CNG	Clearing Main NG information	
CHR	Clearing Hour meter	
D		
DW∗	Decreasing the adjustment value by*	∗:1-9, 0(0 means 10),F(making the adjustment value the minimum)
F		
FAN	Turning Service Factory mode off.	
FAY	Turning Service Factory mode on.	
FST	Final Set Up	
G		
GSL	Adjusting side mask G	
I		
INA	Selection of tuner for terrestrial analog signals.	
INC∗∗∗	Selection of tuner for terrestrial digital signals	436SXE model only ∗ : channel number
INPS01	Input selection: input 1	
INPS02	Input selection: input 2	
INPS03	Input selection: input 3	
INPS04	Input selection: input 4	
O		
OSDS00	Turning the On-Screen Display off	Prohibit On-Screen Display.
OSDS01	Turning the On-Screen Display on	Permit On-Screen Display.
P		
POF	Turning the power off.	
PON	Turning the power on.	
Q		
QS1	Obtaining the version data for each device.	
QS6	Obtaining the any version.	
QMT	Obtaining the MR temperature information.	
QNG	Obtaining NG data of the MR.	
R		
RSL	Adjustment od side mask R	
U		
UP∗	Increasing the adjustment value by *	∗:1-9, 0(0 means 10),F(making the adjustment value the maximum)
Z		
ZME	Initializing of the EEPROM video data	

2. RS-232C command for module microcomputer

Command Name		Function		Effective only in Factory mode	Remarks
A					
ABL	***	ABL ADJUSTMENT	Adjusting the upper limit of the power	O	
AMT	S00	AUDIO MUTE OFF	Turning off the audio muting		
	S01	AUDIO MUTE ON	Turning on the audio muting		
APW	S00	APL WB FUNCTION:OFF	WB correction interlocked with APL: OFF	O	
	S01	APL WB FUNCTION:ON	WB correction interlocked with APL: ON	O	
B					
BAL	***	BALANCE ADJUSTMENT	Audio balance adjustment		
BAS	***	BASS ADJUSTMENT	Audio bass adjustment		
BCP		BACKUP COPY	Copying the backup data in the EEPROM	O	
C					
CBU		CLEAR BACKUP	Clearing backup data	O	
CHM		CLEAR HOUR METER	Clearing data of the hour meter	O	Used only when the panel is replaced
CPC		CLEAR POWER ON COUNT	Clearing power-on count data	O	Used only when the power unit is replaced
CPD		CLEAR POWER DOWN	Clearing power-down information	O	Used only when the panel is replaced
CPM		CLEAR PLUSE METER	Clearing data of the pulse meter	O	Used only when the panel is replaced
CSD		CLEAR SHUT DOWN	Clearing MODULE shutdown information	O	Used only when the panel is replaced
D					
DRV	S00	DRIVE OFF	Sequence drive off		
	S01	DRIVE ON	Sequence drive on		
E					
ESV	S00	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve		
	S01	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve		
	S02	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve		
F					
FAJ		FINISH ADJUSTMENT	Determining the flag of the HD DIGITAL Assy adjustment in "adjustment is completed"	O	
FAN		FACTORY NO		O	
FAY		FACTORY YES	Entering Factory mode		Turning the mask setting off
FCS	S00	FOCUS OFF	Turning the FOCUS function off		
	S01	FOCUS ON	Turning the FOCUS function on		
M					
MKC	S00	MASK COMBINATION OFF	MASK off		
	S01	MASK COMBINATION 01	H ramp (slant 1) M	O	
	S02	MASK COMBINATION 02	H ramp (slant 4) M	O	
	S03	MASK COMBINATION 03	Slanting ramp M	O	
	S04	MASK COMBINATION 04	30 for aging	O	
	S05	MASK COMBINATION 05	05 for aging	O	
	S06	MASK COMBINATION 06	Erasing afterimage 1	O	
	S07	MASK COMBINATION 07	Erasing afterimage 2 (RGB: zigzag, V: reverse)	O	
	S08	MASK COMBINATION 08	White (change in luminance level)	O	
	S09	MASK COMBINATION 09	PEAK SEEK RASTER	O	
MKS	S00	MASK SINGLE OFF	MASK OFF		
	S01	MASK SINGLE 1	H ramp (slant 1)	O	
	S02	MASK SINGLE 2	H ramp (slant 4)	O	
	S03	MASK SINGLE 3	V ramp (slant 1)	O	
	S04	MASK SINGLE 4	Slanting ramp	O	

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S05	MASK SINGLE 5	Window(Hi=870Lo=102)	O	
	S06	MASK SINGLE 6	Window(Hi=1023Lo=102)	O	
	S07	MASK SINGLE 7	Window(Hi=1023)	O	
	S08	MASK SINGLE 8	Window(Hi=1023)4%	O	
	S09	MASK SINGLE 9	Window(Hi=1023)1.25%	O	
	S10	MASK SINGLE 10	Window(1/7LINE)	O	
	S11	MASK SINGLE 11	STRIPE(MGT/GRN)	O	
	S12	MASK SINGLE 12	STRIPE(GRN/MGT)	O	
	S13	MASK SINGLE 13	B & W, checker (1 line)	O	
	S14	MASK SINGLE 14	B & W, checker (2 lines)	O	
	S15	MASK SINGLE 15	B & W, checker (4 lines)	O	
	S16	MASK SINGLE 16	B & W, checker (8 lines)	O	
	S17	MASK SINGLE 17	COLOR BAR	O	
	S18	MASK SINGLE 18	Slanting lines	O	
	S19	MASK SINGLE 19	Red & black, checker (1 line)	O	
	S20	MASK SINGLE 20	Red & black, checker (2 lines)	O	
	S21	MASK SINGLE 21	Red & black, checker (4 ines)	O	
	S22	MASK SINGLE 22	Red & black, checker (8 lines)	O	
	S23	MASK SINGLE 23	RGB zigzag, V reverse	O	
	S24	MASK SINGLE 24	SUS 2000 pulses (black raster)	O	
	S25	MASK SINGLE 25	Window(Hi=870Lo=102) PATTAN3	O	
	S26	MASK SINGLE 26	Window(Hi=1023Lo=102) PATTAN3	O	
	S27	MASK SINGLE 27	Window(Hi=1023) Pattern 3	O	
	S28	MASK SINGLE 28	Window(Hi=1023)4% Pattern 3	O	
	S29	MASK SINGLE 29	Window(Hi=1023)1.25% Pattern 3	O	
	S30	MASK SINGLE 30	Window(1/7LINE) Pattern 3	O	
	S51	MASK SINGLE 51	Raster - White	O	
	S52	MASK SINGLE 52	Raster - Red	O	
	S53	MASK SINGLE 53	Raster - Green	O	
	S54	MASK SINGLE 54	Raster - Blue	O	
	S55	MASK SINGLE 55	Raster - Black	O	
	S56	MASK SINGLE 56	Raster - Cyan	O	
	S57	MASK SINGLE 57	Raster - Magenta	O	
	S58	MASK SINGLE 58	Raster - Yellow	O	
	S59	MASK SINGLE 59	Raster - Cyan 460 :W	O	
	S60	MASK SINGLE 60	Raster - Green 774 :W	O	
	S61	MASK SINGLE 61	Raster - Gray 912 :W	O	
	S62	MASK SINGLE 62	Raster - Yellow egg color: W	O	
	S63	MASK SINGLE 63	Raster - Beige: W	O	
	S64	MASK SINGLE 64	Raster - Sky color: W	O	
	S65	MASK SINGLE 65	Raster - Pale purple: W	O	
	S66	MASK SINGLE 66	Raster - Magenta 54 :W	O	
	S67	MASK SINGLE 67	Raster - Red 588	O	
	S68	MASK SINGLE 68	Red 1023 + α	O	
	S69	MASK SINGLE 69	Green 1023 + α	O	
	S70	MASK SINGLE 70	Blue 1023 + α	O	
	S71	MASK SINGLE 71	Red 588 + α	O	
	S72	MASK SINGLE 72	Green 588 + α	O	
	S73	MASK SINGLE 73	Blue 588 + α	O	

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S74	MASK SINGLE 74	Raster -Gray 512 (reservation)	○	
P					
PAV	S**	PANEL AV MODE	Switching panel functions interlocked with the AV selection		
PBH	***	PANEL BLUE HIGH	Panel white balance adjustment - Blue highlight	○	
PBL	***	PANEL BLUE LOW	Panel white balance adjustment - Blue low light	○	
PDM	S00	PD MUTE OFF	Passing PD signals to the Power SUPPLY Unit => Power-down		
	S01	PD MUTE ON	Not passing PD signals to the Power SUPPLY Unit => No power-down		
PFN		FACTORY NO	PANEL FACTORY mode: off	○	
PFS		PANEL FINAL SETUP	Panel Setup at shipment	○	
PFY		FACTORY YES	PANEL FACTORY mode: on		
PGH	***	PANEL GREEN HIGH	Panel white balance adjustment - Green highlight	○	
PGL	***	PANEL GREEN LOW	Panel white balance adjustment - Green low light	○	
PGM	S**	PANEL GAMMA	Panel Setting of the gamma table		
PMT	S00	MUTE OFF	Canceling panel muting		
	S01	MUTE ON	Panel muting		
POF		POWER OFF	Power off		
PON		POWER ON	Power on		
PPT	S00	PANEL PROTECT OFF	Panel protection: off	○	
	S01	PANEL PROTECT ON	Panel protection: on	○	
PUC	S00	PUER CINEMA:OFF	Pure cinema: off		
	S01	PUER CINEMA:STD	Pure cinema: standard		
	S02	PUER CINEMA:ADV	Pure cinema: advanced		
Q					
QAJ		QUEST ADJUSTMENT	Acquiring various adjustment values		
QIP		QUEST PANEL INFORMATION	Acquiring various input signal data		
QPD		QUEST POWER-DOWN	Acquiring logs of power-down points		
QPM		QUEST PULSE METER	Acquiring data of the pulse meter		
QPW		QUEST PANEL WHITE BALANCE	Acquiring panel white balance adjustment values		
QS1		QUEST STATUS 1	Acquiring data on the unit, such as the version of the program		
QS2		QUEST STATUS 2	Acquiring data on the status of the unit, such as temperature		
QSD		QUEST SHUT DOWN	Acquiring data on Panel shutdown		
QSI		QUEST SIGNAL INFORMATION	Acquiring data related with signals		
R					
RBL	S**	PANEL REVISE BLUE LEVEL	Setting of blue level for panel degradation correction	○	
RGL	S**	PANEL REVISE GREEN LEVEL	Setting of green level for panel degradation correction	○	
RHI	***	RED HIGH	User white balance - Red highlight		
RLW	***	RED LOW	User white balance - Red low light		
RRL	S**	PANEL REVISE RED LEVEL	Setting of red level for panel degradation correction	○	
RSW	***	XY-RST-W ADJ	Adjustment of the width of XY reset pulse	○	
S					
SDM	S00	SD MUTE OFF	Shutdown enabled		
	S01	SD MUTE ON	Shutdown prohibited		
SFR	S01	SUS FREQUENCY MODE1	Measures against AM radio noise - Pattern 1	○	
	S02	SUS FREQUENCY MODE2	Measures against AM radio noise - Pattern 2	○	
	S03	SUS FREQUENCY MODE3	Measures against AM radio noise - Pattern 3	○	
	S04	SUS FREQUENCY MODE4	Measures against AM radio noise - Pattern 4	○	
	S05	SUS FREQUENCY MODE5	Measures against AM radio noise - Pattern 5	○	
	S06	SUS FREQUENCY MODE6	Measures against AM radio noise - Pattern 6	○	
	S07	SUS FREQUENCY MODE7	Measures against AM radio noise - Pattern 7	○	

Command Name		Function		Effective only in Factory mode	Remarks
SFR	S08	SUS FREQUENCY MODE8	Measures against AM radio noise - Pattern 8	○	
SMM	S**	SIDE MASK MODE	Setting of the effective area during streaking correction	○	
SN0	***	SERIAL NO 0	Setting of the serial No. 0 (panel)	○	
SN1	***	SERIAL NO 1	Setting of the serial No. 1 (panel)	○	
SN2	***	SERIAL NO 2	Setting of the serial No. 2 (panel)	○	
SN3	***	SERIAL NO 3	Setting of the serial No. 3 (panel)	○	
SN4	***	SERIAL NO 4	Setting of the serial No. 4 (panel)	○	
SRS	S00	SRS OFF	SRS function: off		
	S01	SRS ON	SRS function: on		
T					
TBS	S00	TRUBASS OFF	TruBass function: off		
	S01	TRUBASS ON	TruBass function: on		
TRE	***	TREBLE ADJUSTMENT	Audio treble adjustment		
U					
UAJ		UN-ADJUSTMENT	Determining the flag for the OB DIGITAL Assy adjustment in "not adjusted"	○	
V					
VFQ	S01	FREQENCY VIDEO 48Hz	Setting the frequency in Mask mode to VD-48 Hz	○	
	S02	FREQENCY VIDEO 50Hz	Setting the frequency in Mask mode to VD-50 Hz	○	
	S03	FREQENCY VIDEO 60Hz	Setting the frequency in Mask mode to VD-60 Hz	○	
	S05	FREQENCY THEATER 72Hz	Setting the frequency in Mask mode to VD-72 Hz	○	
	S06	FREQENCY 75Hz	Setting the frequency in Mask mode to VD-75 Hz	○	
	S13	FREQENCY PC 60Hz	Setting the frequency in Mask mode to PC-60 Hz	○	
	S14	FREQENCY PC 70Hz	Setting the frequency in Mask mode to PC-70 Hz	○	
	S22	FREQENCY VIDEO 50Hz NONSTD	Setting the frequency in Mask mode to VD-50 Hz (nonstandard)	○	
	S23	FREQENCY VIDEO 60Hz NONSTD	Setting the frequency in Mask mode to VD-60 Hz (nonstandard)	○	
	S25	FREQENCY VIDEO 72Hz NONSTD	Setting the frequency in Mask mode to VD-72 Hz (nonstandard)	○	
	S26	FREQENCY VIDEO 75Hz NONSTD	Setting the frequency in Mask mode to VD-75 Hz (nonstandard)	○	
VOF	***	Vofs ADJUSTMENT	Adjustment of the reference value of Vofs voltage	○	
VOL	***	VOLUME	Audio volume adjustment		
VRP	***	Vrp ADJUSTMENT	Adjustment of the reference value of Vrst-p voltage	○	
VSU	***	Vsus ADJUSTMENT	Adjustment of the reference value of Vsus voltage	○	
W					
WBI	S00	WB INITIALIZE NO	Panel WB standard output mode: off	○	
WBI	S01	WB INITIALIZE YES	Panel WB standard output mode: on	○	
X					
XSB	***	X-SUS-B ADJ	X-SUS-B ADJ	○	
Y					
YSB	***	Y-SUS-B ADJ	Y-SUS-B ADJ	○	
YTG	***	Y-SUSTAIL ADJ	Y-SUSTAIL ADJ	○	
YTW	***	Y-SUSTAIL W ADJ	Y-SUSTAIL W ADJ	○	

6.5 OUTLINE OF COMMANDS

QS1: Returning information on the module and the version of the software.

Order	Part	Data Content	Size	Remarks
0	-	Received Command Name	3 byte	'QS1' only
1	DIGITAL	Display Information 1	1 byte	
2		Display Information 2	1 byte	
3		Display Information 3	1 byte	
4		Display Information 4	1 byte	
5		Display Information 5	1 byte	
6		Boot Version of Module microcomputer.	3 byte	
7		Program Version of Module microcomputer.	8 byte	
8		Boot Version of ASTRA MANTA	3 byte	
9		Program Version of ASTRA MANTA	8 byte	
10		Sequence Version (43VIDEO)	4 byte	
11		Sequence Version (43PC)	4 byte	
12		Sequence Version (50VIDEO)	4 byte	
13		Sequence Version (50PC)	4 byte	
14	MAIN	, (comma)	1 byte	
15		Product Infomation 1	1 byte	
16		Product Infomation 2	1 byte	
17		Product Infomation 3	1 byte	
18		Product Infomation 4	1 byte	
19		Version of IF microcomputer	4 byte	
20		Version of Main microcomputer	8 byte	
21		Boot Version of Main microcomputer	4 byte	
22		Program Version of CARRERA-MANTA	8 byte	
23		Boot Data Version of CARRERA-MANTA (DAT)	4 byte	
24		GUI Data Version of CARRERA-MANTA (GUI-DAT)	8 byte	
25		Enhanced Data Version of CARRERA-MANTA (WID-DAT)	8 byte	
26		PIC Data Version of CARRERA-MANTA (PIC-DAT)	8 byte	

QS6: Returning information of the Flash Device.

Order	Data Content	Size	Remarks
0	Received Command Name	3 byte	'QS6' only
1	Version of DTB (PDP-436SXE only)	4 byte	
2	Version of PC Card	8 byte	All " 0 "
3	Version of Text	60 byte	
4	User Passward	4 byte	

QMT: Returning information of temperature and FAN speed.

Order	Data Content	Size	Remark
1	Received Command Name	3 byte	'QMT' only
2	Temperature	3 byte	
3	FAN Information	1 byte	0: STOP 1: MIN 2: MAX

QNG: Returning data (logs keep on Main microcomputer) on shutdown of Main ASSY.

Order	Data	Size	Context
0	Received Command Name	3 byte	'QNG' only
1	Latest NG data	1 byte	
2	Data of subcategory for the latest NG	1 byte	
3	Data of hour meter for the latest NG	7 byte	
4	Data of temperature for the latest NG	3 byte	
5	2nd latest NG data	1 byte	
6	Data of subcategory for the 2nd latest NG	1 byte	
7	Data of hour meter for the 2nd latest NG	7 byte	
8	Data of temperature for the 2nd latest NG	3 byte	
:	:	:	
29	8th latest NG data	1 byte	
30	Data of subcategory for the 8th latest NG	1 byte	
31	Data of hour meter for the 8th latest NG	7 byte	
32	Data of temperature for the 8th latest NG	3 byte	

• Details on the NG data and subcategory

Data	Cause of Shutdown	Remarks
0	Normal	
1	Failure of communication to Module microcomputer	
2	3-wire Serial Communication of Main microcomputer.	Subcategory ⇒ 1
3	IIC Communication failure of Main microcomputer	Subcategory ⇒ 2
4	Communication failure of Main microcomputer &Unknown Error	
5	Fan stopped	
6	Abnormally high temperature	
7	Failure of Digital Tuner	Subcategory ⇒ 3
8	Abnormalilty in ASIC power line (DC-DC)	

• Data on Subcategories for failure in 3-wire serial communication of Main microcomputer (subcategory 1)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Communication failure of IF microcomputer	Power OFF
2	MANTA communication failure(MULIT1)	Power OFF
3	MANTA communication failure(MULIT2)	Reserved
4	MANTA communication failure(I/P)	
5	MANTA communication failure(D-SEL)	

• Data on Subcategories for failure in IIC communication of Main microcomputer (subcategory 2)

Data	Cause of Shutdown	Data	Cause of Shutdown
0	Non subcategory	A	AD/PLL
1	Analog Tuner 1(Front End 1)	B	HDMI
2	–	C	TMDS Tx
3	MPX	D	TMDS Rx
4	AV Switch	E	M2 Communication
5	RGB Switch	F	M2 Busy
6	CCD	G	64k EEPROM
7	GCR		
8	Main VDEC		
9	–		

• Data on Subcategories for failure in the DTB communication of Main microcomputer (subcategory 3)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Failure to DTB Starting	
2	Communication failure to DTB	

■ Acquisition of panel operation data • • • [QS2]

The command QS2 is for acquiring data on the panel's operations. Basically, this command is used for the module's microcomputer to inform the main unit's microcomputer of changes in panel operation.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+23(DATA)+2(CS)=28Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS2
1	Notification of mode shifting to STB	1Byte	1
2	Flag for adjustment of the panel unit	1Byte	0
3	Flag for adjustment-data backup	1Byte	0
4	"1st PD" data	1Byte	0
5	"2nd PD" data	1Byte	0
6	Reservation	3Byte	***
7	Temperature data (TEMP 1)	3Byte	128
8	SD main data	1Byte	0
9	SD subdata	1Byte	0
10	Operation status induced by SD	1Byte	0
11	Data from the hour meter	8Byte	00000259
12	MASK indication	1Byte	0
CS		2Byte	4A

Note : "00000259" of "Data from the hour meter" means 2 hours 59 minuts.

● Notification of mode shifting to Standby	
0	Disable to transfer to Standby mode
1	Able to transfer to Standby mode

● Adjustment of the panel unit	
0	Adjustment completed
1	Adjustment not completed

● Adjustment-data backup	
0	With backup data
1	No data

● PD data	
0	No PD data
1	Not used
2	POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRV
A	X-DCDC
B	X-SUS
C	Not used
D	SQ-IC
E	Not used
F	Specification inability

● SD main data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subdata (IIC)	
0	No SD subdata
1	EEPROM
2	BACKUP
3	DAC
4	VOL IC
5	DVI

● Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

● MASK indication	
0	MASK-OFF
1	MASK-ON

■ Acquisition of other data on the panel • • • [QIP]

The command QIP is for acquiring data other than those available with QS1 (data necessary before turning the power on) and QS2 (data to inform of operational status change).

Command Format	Effective Operation Modes	Function	Remarks
[QIP]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+39(DATA)+2(CS)=44Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QIP
1	SERIAL	15Byte	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
2	HOUR METER	8Byte	00000000
3	BACKUP HR MTR	8Byte	00000000
4	PON COUNTER	8Byte	00000000
CS		2Byte	94

Note : " Serial number" is not inputted in this model.

■ Acquisition of panel adjustment data (common data) • • • [QAJ]

The command QAJ is for acquiring data on the panel's factory-preset items that are common to the main unit and that share the same memory.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+27(DATA)+2(CS)=32Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QAJ
1	V-SUS adjustment value	3Byte	128
2	V-OFT adjustment value	3Byte	128
3	V-RST-P adjustment value	3Byte	128
4	XSB adjustment value	3Byte	128
5	YSB adjustment value	3Byte	128
6	YTG adjustment value	3Byte	128
7	YTW adjustment value	3Byte	128
8	RSW adjustment value	3Byte	128
9	R-RIVISE setting value	1Byte	0
10	G-RIVISE setting value	1Byte	0
11	B-RIVISE setting value	1Byte	0
CS		2Byte	B7

■ Acquisition of ABL/WB adjustment data • • • [QPW]

The command QPW is for acquiring data on the panel's factory-preset items whose memory tables are changed in sequence.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+35(DATA)+2(CS)=40Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPW
1	Drive sequence	3Byte	60V
2	Standard/nonstandard	1Byte	S
3	Type of ABL/WB tables	2Byte	T2
4	ABL adjustment value	3Byte	128
5	R-HIGH adjustment value	3Byte	256
6	G-HIGH adjustment value	3Byte	256
7	B-HIGH adjustment value	3Byte	256
8	R-LOW adjustment value	3Byte	512
9	G-LOW adjustment value	3Byte	512
10	B-LOW adjustment value	3Byte	512
11	Gamma setting	1Byte	A
12	Streaking correction	1Byte	1
13	Peripheral luminance correction	1Byte	0
14	Reservation	1Byte	*
15	WB interlocked with APL	1Byte	0
16	Transition of protective operations	1Byte	0
17	Reservation	2Byte	**
CS		2Byte	37

● Drive sequence

48V	Video48 Hz
50V	Video50 Hz
60V	Video60 Hz
72V	Video72 Hz
75V	Video75 Hz
60P	PC60Hz
70P	PC70Hz

● Standard/ nonstandard

S	Standard
N	Nonstandard

● Gamma setting

n	0 to F

● Setting for Items 12 and 15

0	OFF
1	ON

● Peripheral luminance correction

0	OFF
2	ON (interlocked with APL)

● Transition of brightness by protective operations

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

● Type of ABL/WB tables

Tn	n: 1 to 4

■ Acquisition of parameters • • • [QPM]

The command QPM is for acquiring the accumulated number of pulses for each of 5 blocks from the EEPROM.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+40(DATA)+2(CS)=45Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPM
1	Pulse meter B 1	8Byte	00000000
2	Pulse meter B 2	8Byte	00000000
3	Pulse meter B 3	8Byte	00000000
4	Pulse meter B 4	8Byte	00000000
5	Pulse meter B 5	8Byte	00000000
CS		2Byte	E7

• The output data on the accumulated number of pulses for each block are calculated in the following way: the high-order 4 bytes of the accumulated number of pulses for each block are converted into a decimal number, and the high-order 8 digits are transmitted. The unit of each block is M_pulse (mega).

■ Acquisition of PD logs • • • [QPD]

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	All operations	To acquire data on the power-down logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPD
1	Latest "1st PD" data	1byte	A
2	Latest "2nd PD" data	1byte	2
3	Data from the hour meter for the latest PD	8byte	00010020
4	Second latest "1st PD" data	1byte	E
5	Second latest "2nd PD" data	1byte	9
6	Data from the hour meter for the second latest PD	8byte	00008523
7	Third latest "1st PD" data	1byte	4
8	Third latest "2nd PD" data	1byte	3
9	Data from the hour meter for the third latest PD	8byte	00004335
10	Fourth latest "1st PD" data	1byte	2
11	Fourth latest "2nd PD" data	1byte	0
12	Data from the hour meter for the fourth latest PD	8byte	00000945
13	Fifth latest "1st PD" data	1byte	4
14	Fifth latest "2nd PD" data	1byte	0
15	Data from the hour meter for the fifth latest PD	8byte	00000715
16	Sixth latest "1st PD" data	1byte	A
17	Sixth latest "2nd PD" data	1byte	2
18	Data from the hour meter for the sixth latest PD	8byte	00000552
19	Seventh latest "1st PD" data	1byte	A
20	Seventh latest "2nd PD" data	1byte	0
21	Data from the hour meter for the seventh latest PD	8byte	00000213
22	Eighth latest "1st PD" data	1byte	D
23	Eighth latest "2nd PD" data	1byte	0
24	Data from the hour meter for the eighth latest PD	8byte	000001A7
CS		2Byte	27

● PD data	
0	No PD
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	Address
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	QS (driving stopped)
E	Not used
F	Specification inability

■ Acquisition of SD logs • • • [QSD]

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	All operations	To acquire data on the shutdown logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSD
1	Latest SD data	1byte	1
2	Latest SD subcategory data	1byte	0
3	Data from the hour meter for the latest SD	8byte	00752013
4	Second latest SD data	1byte	5
5	Second latest SD subcategory data	1byte	0
6	Data from the hour meter for the second latest SD	8byte	00495204
7	Third latest SD data	1byte	2
8	Third latest SD subcategory data	1byte	3
9	Data from the hour meter for the third latest SD	8byte	00100355
10	Fourth latest SD data	1byte	2
11	Fourth latest SD subcategory data	1byte	5
12	Data from the hour meter for the fourth latest SD	8byte	00075620
13	Fifth latest SD data	1byte	1
14	Fifth latest SD subcategory data	1byte	0
15	Data from the hour meter for the fifth latest SD	8byte	00000852
16	Sixth latest SD data	1byte	2
17	Sixth latest SD subcategory data	1byte	5
18	Data from the hour meter for the sixth latest SD	8byte	000000451
19	Seventh latest SD data	1byte	0
20	Seventh latest SD subcategory data	1byte	0
21	Data from the hour meter for the seventh latest SD	8byte	00000000
22	Eighth latest SD data	1byte	0
23	Eighth latest SD subcategory data	1byte	0
24	Data from the hour meter for the eighth latest SD	8byte	00000000
CS		2Byte	7D

● SD data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subcategory	
0	No SD subcategory
1	EEPROM
2	BACKUP
3	DAC
4	VOL-IC
5	DVI
6	Not used

■ Acquisition of input signal data • • • [QSI]

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	All operations	To acquire all data on input video signals	Return data: 3 (ECO)+66(DATA)+2(CS)=71Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSI
1	Type of drive sequence	3byte	60V
2	Standard/nonstandard	1byte	S
3	Type of ABL/WB tables	2byte	T1
4	Total value of PCN	4byte	0256
5	Total value of PRH	4byte	0256
6	Total value of PGH	4byte	0256
7	Total value of PBH	4byte	0256
8	Total value of PBR	4byte	0512
9	Total value of PRL	4byte	0512
10	Total value of PGL	4byte	0512
11	Total value of PBL	4byte	0512
12	Reservation	2byte	**
13	Detection of existence of H	1byte	Y
14	Detection of V frequency	4byte	6002
15	Reservation	4byte	****
16	Obtained APL data	4byte	1023
17	Number of SUS pulses	4byte	0457
18	Result of detection of still picture	1byte	1
19	Result of detection of cracking in the panel	1byte	1
20	Result of detection for scanning protection	1byte	1
21	Result of detection for external protection	1byte	1
22	Transition of protection operation	1byte	0
23	Reservation	4byte	****
CS		2Byte	27

● Detection of existence of H

N	No H
Y	H detected

● Transition of brightness by protection operation

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

- If data for an item cannot be obtained during Standby mode, the return data for that item will be "∗."
- The types of data for Items 1-3 in the table (drive sequence, standard/nonstandard, and type of ABL/WB tables) are the same as with the command QPW.
- Each total value for Items 4-11 represents that of panel WB, user WB, and degradation correction, and the actual data being sent to the ASTRA are output.
- Detection of V frequency: The V signal input to the panel is measured in the range of 30.51 to 99.99 Hz. The measured value is multiplied by 100 and then output.
- Number of SUS pulses : The number is calculated from data from APL and the drive sequence. The output value must be between 0174 and 2752.
- APL value: The APL value for the input video signal (or mask indication) will be output in the range of 0000 to 1023.

■ Setting for Factory mode permission/prohibition • • • [FAY/FAN] [PFY/PFN]

The commands FAY/FAN and PFY/PFN are for prohibiting/permitting panel-adjustment commands during normal operation and are to be used to avoid accidental change of panel adjustment values.

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[FAY]	Normal operation mode while the power is on	Adjustment mode: ON	Mask indications will be forcibly turned off.
[PFY]			With a PFY command, the mask does not change.
[FAN]	During FAY	Adjustment mode: OFF	
[PFN]			

• Commands that are effective during normal operation will also be effective during FAY (PFY) mode.

Note:

• The functions shown below will be forcibly switched when Mask ON/OFF is switched. (Even if the panel is off, changed settings will be retained.)
While the status of Mask ON or OFF is maintained, if settings for the individual functions shown in ① and ② are changed, those settings are retained (even if the drive frequency is changed).

① Functions related to picture quality

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Peripheral luminance correction	OFF	ON	
WB correction interlocked with APL	OFF	ON	
Streaking correction	OFF	ON	

② Functions related to panel protection

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Detection of still picture	OFF	ON	
Detection of cracking in the panel	OFF	ON	
Scanning protection	OFF	ON	

• Depending on the type of mask displayed, phosphor burn of the panel may occur. As the panel-protection function is forcibly turned off with this model, care must be taken when color-bar signals are to be displayed for an extended period.

■ Backup function for adjustment values for the panel unit • • • [FAJ/UAJ/CBU/BCP]

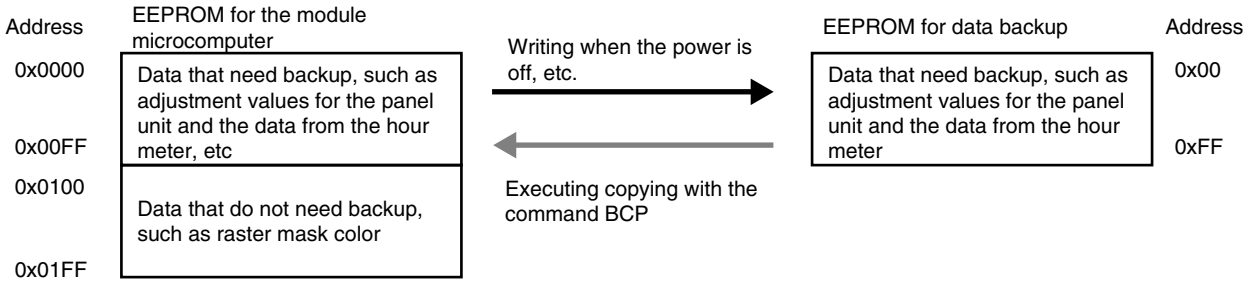
When the OB DIGITAL Assy is to be replaced, adjustment values can be copied from the backup EEPROM to the EEPROM of the Assy for service.

Command Format	Operation			Remarks
	Effective Operation Modes	Control (by the microcomputer itself)		
[FAJ]	During FAY	To make the flag setting that indicating that adjustment of the panel unit has been completed	Writing 00 to the 4-kbyte ROM and copying to the 2-kbyte ROM	This takes at least 350 ms.
[UAJ]		To make the flag setting that indicating that adjustment of the main unit has not been completed	Writing F0 to the 4-kbyte ROM	
[CBU]		To make the flag setting that indicating that backup data have not been copied	Writing F0 to the 2-kbyte ROM	The backup ROM is initialized.
[BCP]		To copy Digital backup data to EEPROM	Copying backup data	

When the flag indicating that the production line adjustments (SUS waveform, voltage margin, and panel WB) for the panel unit have been completed is set to on, data stored from Addresses 0x0000 to 0X00FF in the digital EEPROM are copied to the same addresses of the backup EEPROM. Copying will be executed immediately before the relay of normal operation is off.

- When the command BCP is received while a warning indicating that backup copying has not been completed is displayed (conditions: Digital EEPROM = not adjusted, and backup EEPROM = adjusted), backed-up data will be copied to the Digital EEPROM, and various adjustment values related to Factory mode will be readjusted. Then LED warning indication will be shut off, and normal LED indication will be restored.

- If the backup EEPROM has not been adjusted when the command BCP is received (0x0063 is not written to all three addresses of the key data), copying of the backup data is not possible, and "XXX" is returned.


Address
EEPROM for the module microcomputer
0x0000
Data that need backup, such as adjustment values for the panel unit and the data from the hour meter, etc
0x00FF
0x0100
Data that do not need backup, such as raster mask color
0x01FF
Writing when the power is off, etc.
Executing copying with the command BCP
EEPROM for data backup
Address
Data that need backup, such as adjustment values for the panel unit and the data from the hour meter
0x00
0xFF

Note:

- When the command FAJ, UAJ, or CBU is executed, only high-order one-byte (0x00 or 0xF0) key data will be written to the EEPROM, and lower-order one-byte (0x63) data will not be changed.
- It takes at least 350 ms from reception of the command FAJ until an echo is sent back, because data are copied to the backup EEPROM.

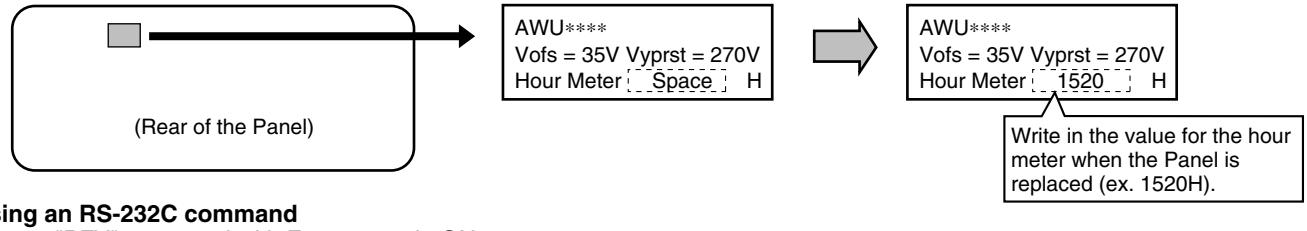
6.6 METHOD FOR REPLACING THE SERVICE PANEL ASSY

When the Panel Assy is replaced with one for service, the following adjustments are required:

■ Adjustments of Vofs voltage and Vyprst voltage

Enter the reference adjustment values for the Vofs voltage and Vyprst voltage that are written on the label attached to the panel for service.

Note: Enter the values, using an RS-232C command or the Factory Menu.


(Rear of the Panel)
AWU****
Vofs = 35V Vyprst = 270V
Hour Meter Space H
AWU****
Vofs = 35V Vyprst = 270V
Hour Meter 1520 H
Write in the value for the hour meter when the Panel is replaced (ex. 1520H).

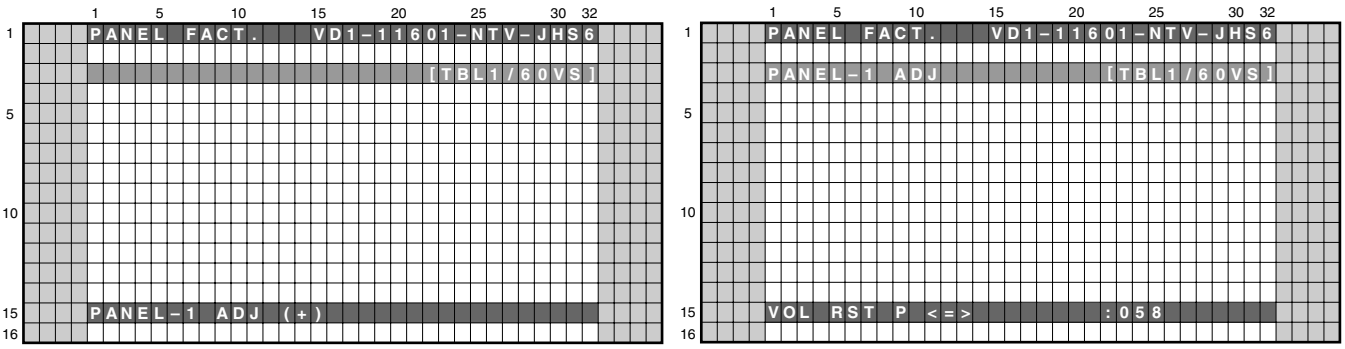
Using an RS-232C command

Enter a "PFY" command with Factory mode ON.

Convert the adjustment voltage values written on the label attached at the rear of the Panel to an input command, referring to the conversion chart. (See the next page.)

- Reference adjustment of the Vofs voltage: Ex. "Vofs = 35" → (Check the conversion chart.) Enter "VOF112."
- Reference adjustment of the Vyprst voltage: Ex. 50-inch "Vyprst = 270 V" → (Check the conversion chart.) Enter "VRP055." (Note that the conversion charts for 50-inch and 43-inch Panels are different.)

Using the Factory Menu



Select the main item "PANEL FACT." by pressing the MUTE key then enter Panel Factory mode by pressing the SET key.
Using the ▲/▼ keys, select "PANEL-1 ADJ" then press the SET key to enter the next lower nested layer.
Select "VOL-OFFSET" or "VOL RST P" then enter a command value converted from the voltage value, using the ◄/► keys.

■ Clearing data on various histories of the Panel, such as those on the hour meter

- It is necessary to clear the data on the hour meter, etc. to match them to the actual driving hours of the Panel.
- It is also necessary to clear the data on SD and PD, because the accumulated power-on time when a shutdown or power-down occurred is recorded.

Note: Clear the values, using an RS-232C command or the Factory Menu.
There are two types of hour meters. Do not take the MR hour meter for the hour meter.

Using an RS-232C command

To acquire the accumulated power-on time of the product itself, use the "GS2" RS-232C command.

1 To clear the data on the hour meter (for the Panel) : CHM
2 To clear the data on the pulse meter : CPM
3 To clear the data on the SD history : CSD
4 To clear the data on the PD history : CPD

Using the Factory Menu

See "7.1.6 HOW TO CLEAR HISTORY DATA."

■ Conversion charts for electronic VRs: Conversion chart for the Vofs

Conversion chart for the Vofs (Commands vs. voltage values)

Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]
VOF000	14.09	VOF056	24.55	VOF112	35.01	VOF168	45.47	VOF224	55.93
VOF001	14.28	VOF057	24.74	VOF113	35.20	VOF169	45.66	VOF225	56.12
VOF002	14.46	VOF058	24.92	VOF114	35.38	VOF170	45.85	VOF226	56.31
VOF003	14.65	VOF059	25.11	VOF115	35.57	VOF171	46.03	VOF227	56.49
VOF004	14.84	VOF060	25.30	VOF116	35.76	VOF172	46.22	VOF228	56.68
VOF005	15.02	VOF061	25.48	VOF117	35.95	VOF173	46.41	VOF229	56.87
VOF006	15.21	VOF062	25.67	VOF118	36.13	VOF174	46.59	VOF230	57.05
VOF007	15.40	VOF063	25.86	VOF119	36.32	VOF175	46.78	VOF231	57.24
VOF008	15.58	VOF064	26.04	VOF120	36.51	VOF176	46.97	VOF232	57.43
VOF009	15.77	VOF065	26.23	VOF121	36.69	VOF177	47.15	VOF233	57.61
VOF010	15.96	VOF066	26.42	VOF122	36.88	VOF178	47.34	VOF234	57.80
VOF011	16.14	VOF067	26.61	VOF123	37.07	VOF179	47.53	VOF235	57.99
VOF012	16.33	VOF068	26.79	VOF124	37.25	VOF180	47.71	VOF236	58.17
VOF013	16.52	VOF069	26.98	VOF125	37.44	VOF181	47.90	VOF237	58.36
VOF014	16.70	VOF070	27.17	VOF126	37.63	VOF182	48.09	VOF238	58.55
VOF015	16.89	VOF071	27.35	VOF127	37.81	VOF183	48.27	VOF239	58.73
VOF016	17.08	VOF072	27.54	VOF128	38.00	VOF184	48.46	VOF240	58.92
VOF017	17.27	VOF073	27.73	VOF129	38.19	VOF185	48.65	VOF241	59.11
VOF018	17.45	VOF074	27.91	VOF130	38.37	VOF186	48.83	VOF242	59.30
VOF019	17.64	VOF075	28.10	VOF131	38.56	VOF187	49.02	VOF243	59.48
VOF020	17.83	VOF076	28.29	VOF132	38.75	VOF188	49.21	VOF244	59.67
VOF021	18.01	VOF077	28.47	VOF133	38.93	VOF189	49.39	VOF245	59.86
VOF022	18.20	VOF078	28.66	VOF134	39.12	VOF190	49.58	VOF246	60.04
VOF023	18.39	VOF079	28.85	VOF135	39.31	VOF191	49.77	VOF247	60.23
VOF024	18.57	VOF080	29.03	VOF136	39.49	VOF192	49.96	VOF248	60.42
VOF025	18.76	VOF081	29.22	VOF137	39.68	VOF193	50.14	VOF249	60.60
VOF026	18.95	VOF082	29.41	VOF138	39.87	VOF194	50.33	VOF250	60.79
VOF027	19.13	VOF083	29.59	VOF139	40.05	VOF195	50.52	VOF251	60.98
VOF028	19.32	VOF084	29.78	VOF140	40.24	VOF196	50.70	VOF252	61.16
VOF029	19.51	VOF085	29.97	VOF141	40.43	VOF197	50.89	VOF253	61.35
VOF030	19.69	VOF086	30.15	VOF142	40.62	VOF198	51.08	VOF254	61.54
VOF031	19.88	VOF087	30.34	VOF143	40.80	VOF199	51.26	VOF255	61.72
VOF032	20.07	VOF088	30.53	VOF144	40.99	VOF200	51.45		
VOF033	20.25	VOF089	30.71	VOF145	41.18	VOF201	51.64		
VOF034	20.44	VOF090	30.90	VOF146	41.36	VOF202	51.82		
VOF035	20.63	VOF091	31.09	VOF147	41.55	VOF203	52.01		
VOF036	20.81	VOF092	31.28	VOF148	41.74	VOF204	52.20		
VOF037	21.00	VOF093	31.46	VOF149	41.92	VOF205	52.38		
VOF038	21.19	VOF094	31.65	VOF150	42.11	VOF206	52.57		
VOF039	21.37	VOF095	31.84	VOF151	42.30	VOF207	52.76		
VOF040	21.56	VOF096	32.02	VOF152	42.48	VOF208	52.94		
VOF041	21.75	VOF097	32.21	VOF153	42.67	VOF209	53.13		
VOF042	21.94	VOF098	32.40	VOF154	42.86	VOF210	53.32		
VOF043	22.12	VOF099	32.58	VOF155	43.04	VOF211	53.50		
VOF044	22.31	VOF100	32.77	VOF156	43.23	VOF212	53.69		
VOF045	22.50	VOF101	32.96	VOF157	43.42	VOF213	53.88		
VOF046	22.68	VOF102	33.14	VOF158	43.60	VOF214	54.06		
VOF047	22.87	VOF103	33.33	VOF159	43.79	VOF215	54.25		
VOF048	23.06	VOF104	33.52	VOF160	43.98	VOF216	54.44		
VOF049	23.24	VOF105	33.70	VOF161	44.16	VOF217	54.63		
VOF050	23.43	VOF106	33.89	VOF162	44.35	VOF218	54.81		
VOF051	23.62	VOF107	34.08	VOF163	44.54	VOF219	55.00		
VOF052	23.80	VOF108	34.26	VOF164	44.72	VOF220	55.19		
VOF053	23.99	VOF109	34.45	VOF165	44.91	VOF221	55.37		
VOF054	24.18	VOF110	34.64	VOF166	45.10	VOF222	55.56		
VOF055	24.36	VOF111	34.82	VOF167	45.29	VOF223	55.75		

■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (1/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 43-inch model)

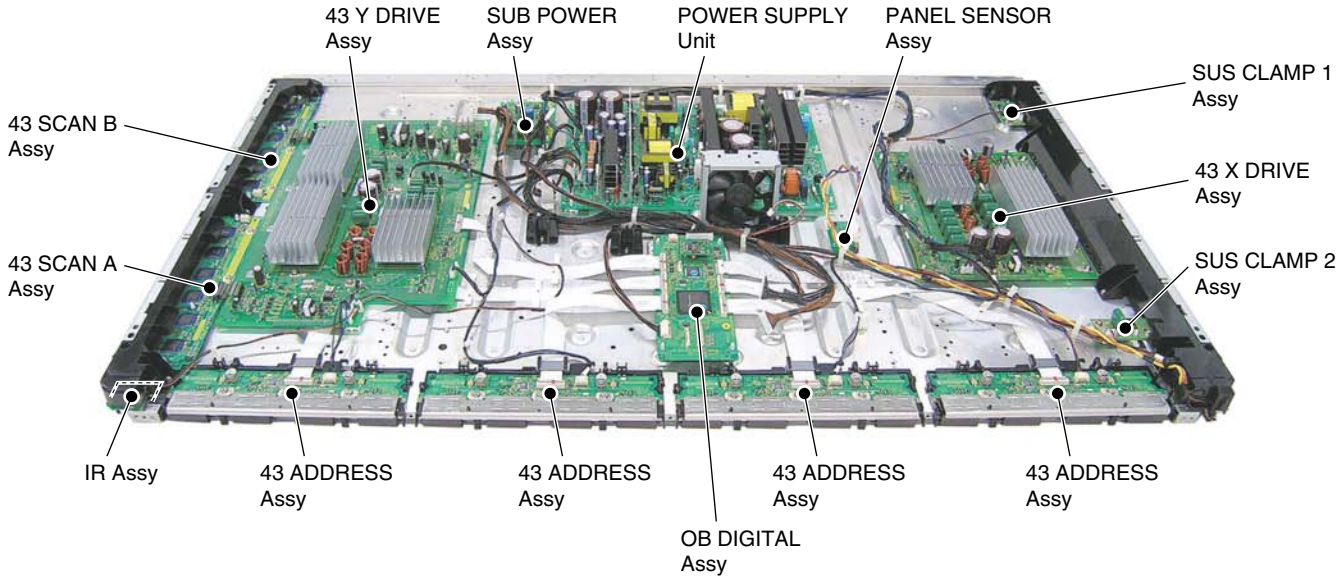
Command	Voltage [V] 43-inch Model	Command	Voltage [V] 43-inch Model	Command	Voltage [V] 43-inch Model
VRP000	236.3	VRP056	260.6	VRP112	284.9
VRP001	236.7	VRP057	261.0	VRP113	285.4
VRP002	237.1	VRP058	261.5	VRP114	285.8
VRP003	237.6	VRP059	261.9	VRP115	286.2
VRP004	238.0	VRP060	262.3	VRP116	286.7
VRP005	238.4	VRP061	262.8	VRP117	287.1
VRP006	238.9	VRP062	263.2	VRP118	287.5
VRP007	239.3	VRP063	263.6	VRP119	288.0
VRP008	239.7	VRP064	264.1	VRP120	288.4
VRP009	240.2	VRP065	264.5	VRP121	288.8
VRP010	240.6	VRP066	264.9	VRP122	289.3
VRP011	241.0	VRP067	265.4	VRP123	289.7
VRP012	241.5	VRP068	265.8	VRP124	290.1
VRP013	241.9	VRP069	266.2	VRP125	290.6
VRP014	242.4	VRP070	266.7	VRP126	291.0
VRP015	242.8	VRP071	267.1	VRP127	291.4
VRP016	243.2	VRP072	267.5	VRP128	291.9
VRP017	243.7	VRP073	268.0	VRP129	292.3
VRP018	244.1	VRP074	268.4	VRP130	292.7
VRP019	244.5	VRP075	268.9	VRP131	293.2
VRP020	245.0	VRP076	269.3	VRP132	293.6
VRP021	245.4	VRP077	269.7	VRP133	294.0
VRP022	245.8	VRP078	270.2	VRP134	294.5
VRP023	246.3	VRP079	270.6	VRP135	294.9
VRP024	246.7	VRP080	271.0	VRP136	295.3
VRP025	247.1	VRP081	271.5	VRP137	295.8
VRP026	247.6	VRP082	271.9	VRP138	296.2
VRP027	248.0	VRP083	272.3	VRP139	296.7
VRP028	248.4	VRP084	272.8	VRP140	297.1
VRP029	248.9	VRP085	273.2	VRP141	297.5
VRP030	249.3	VRP086	273.6	VRP142	298.0
VRP031	249.7	VRP087	274.1	VRP143	298.4
VRP032	250.2	VRP088	274.5	VRP144	298.8
VRP033	250.6	VRP089	274.9	VRP145	299.3
VRP034	251.0	VRP090	275.4	VRP146	299.7
VRP035	251.5	VRP091	275.8	VRP147	300.1
VRP036	251.9	VRP092	276.2	VRP148	300.6
VRP037	252.3	VRP093	276.7	VRP149	301.0
VRP038	252.8	VRP094	277.1	VRP150	301.4
VRP039	253.2	VRP095	277.5	VRP151	301.9
VRP040	253.6	VRP096	278.0	VRP152	302.3
VRP041	254.1	VRP097	278.4	VRP153	302.7
VRP042	254.5	VRP098	278.8	VRP154	303.2
VRP043	254.9	VRP099	279.3	VRP155	303.6
VRP044	255.4	VRP100	279.7	VRP156	304.0
VRP045	255.8	VRP101	280.1	VRP157	304.5
VRP046	256.3	VRP102	280.6	VRP158	304.9
VRP047	256.7	VRP103	281.0	VRP159	305.3
VRP048	257.1	VRP104	281.4	VRP160	305.8
VRP049	257.6	VRP105	281.9	VRP161	306.2
VRP050	258.0	VRP106	282.3	VRP162	306.6
VRP051	258.4	VRP107	282.8	VRP163	307.1
VRP052	258.9	VRP108	283.2	VRP164	307.5
VRP053	259.3	VRP109	283.6	VRP165	307.9
VRP054	259.7	VRP110	284.1	VRP166	308.4
VRP055	260.2	VRP111	284.5	VRP167	308.8

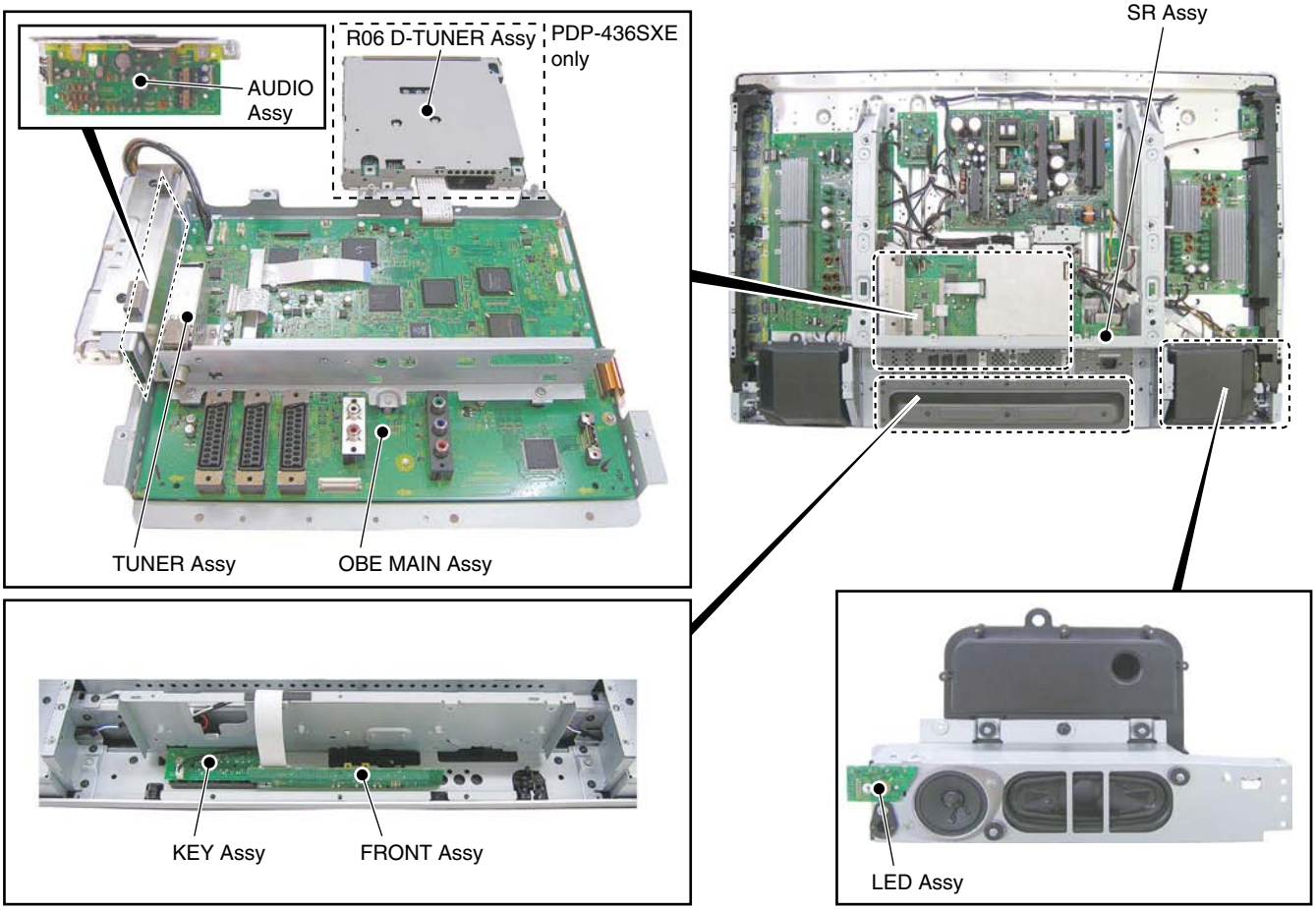
■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (2/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 43-inch model)

Command	Voltage [V]	Command	Voltage [V]
	43-inch Model		43-inch Model
VRP168	309.2	VRP224	333.6
VRP169	309.7	VRP225	334.0
VRP170	310.1	VRP226	334.4
VRP171	310.6	VRP227	334.9
VRP172	311.0	VRP228	335.3
VRP173	311.4	VRP229	335.7
VRP174	311.9	VRP230	336.2
VRP175	312.3	VRP231	336.6
VRP176	312.7	VRP232	337.1
VRP177	313.2	VRP233	337.5
VRP178	313.6	VRP234	337.9
VRP179	314.0	VRP235	338.4
VRP180	314.5	VRP236	338.8
VRP181	314.9	VRP237	339.2
VRP182	315.3	VRP238	339.7
VRP183	315.8	VRP239	340.1
VRP184	316.2	VRP240	340.5
VRP185	316.6	VRP241	341.0
VRP186	317.1	VRP242	341.4
VRP187	317.5	VRP243	341.8
VRP188	317.9	VRP244	342.3
VRP189	318.4	VRP245	342.7
VRP190	318.8	VRP246	343.1
VRP191	319.2	VRP247	343.6
VRP192	319.7	VRP248	344.0
VRP193	320.1	VRP249	344.4
VRP194	320.5	VRP250	344.9
VRP195	321.0	VRP251	345.3
VRP196	321.4	VRP252	345.7
VRP197	321.8	VRP253	346.2
VRP198	322.3	VRP254	346.6
VRP199	322.7	VRP255	347.0
VRP200	323.2		
VRP201	323.6		
VRP202	324.0		
VRP203	324.5		
VRP204	324.9		
VRP205	325.3		
VRP206	325.8		
VRP207	326.2		
VRP208	326.6		
VRP209	327.1		
VRP210	327.5		
VRP211	327.9		
VRP212	328.4		
VRP213	328.8		
VRP214	329.2		
VRP215	329.7		
VRP216	330.1		
VRP217	330.5		
VRP218	331.0		
VRP219	331.4		
VRP220	331.8		
VRP221	332.3		
VRP222	332.7		
VRP223	333.1		

7. GENERAL INFORMATION
7.1 DIAGNOSIS
7.1.1 PCB LOCATION





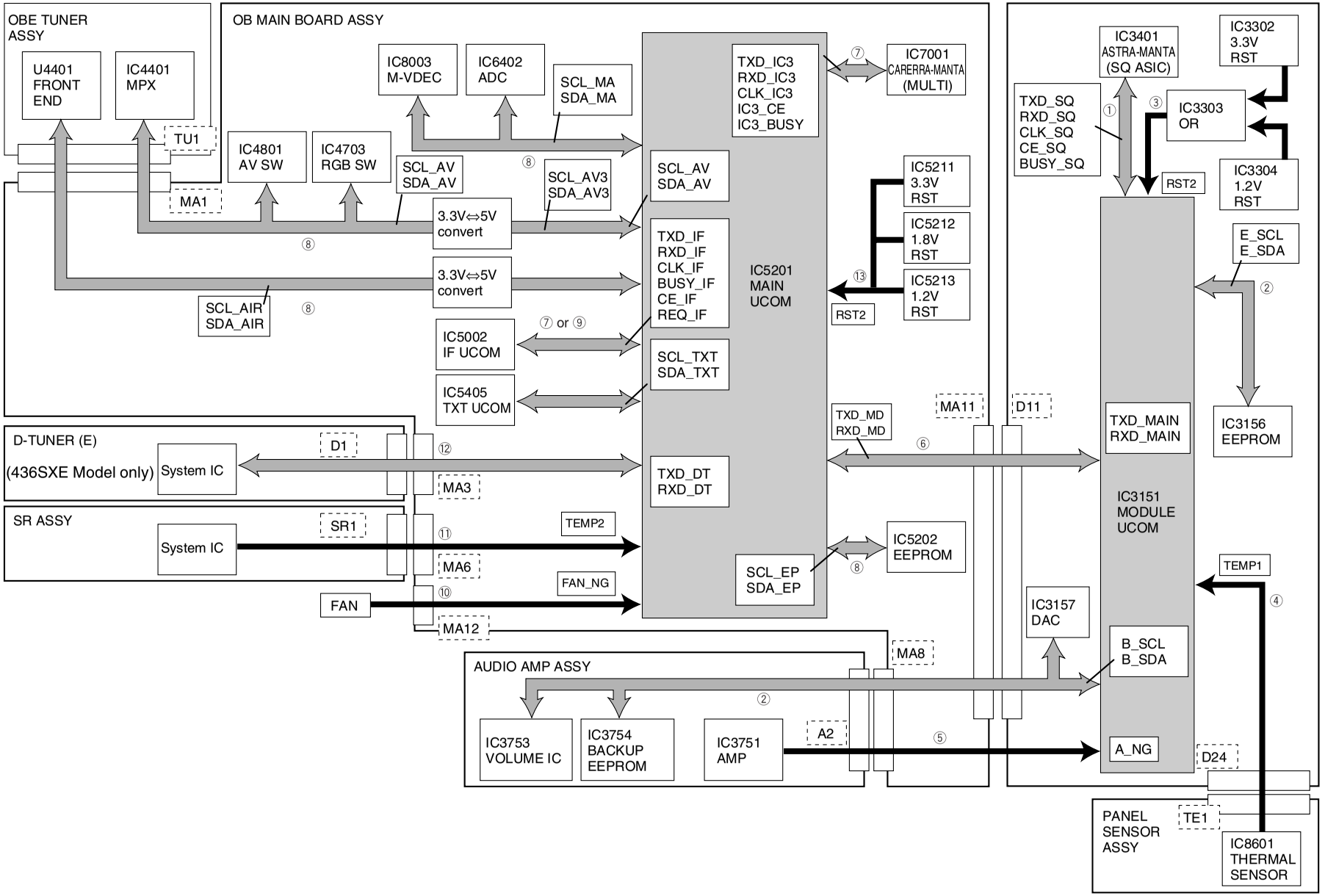
7.1.2 DIAGNOSIS OF SHUTDOWN/POWER-DOWN INDICATED BY LEDS

■ LED Pattern

State			LED Pattern
Standby (Power management)	Red light	B R	
Power ON	Blue lights	B R	
Power Down	Red n times (500+2500ms)	B R	1 times, 2 times, 500ms, n times, 2.5S, 1 times
Shutdown	Blue n times (500+2500ms)	B R	500ms, 1 times, 2 times, n times, 2.5S, 1 times
Backup copy NG	Red ligts + Blue Flashes (200ms)	B R	200ms
Ucom rewriting	Red Blue Flashes (100ms)	B R	100ms, 100ms

■ Block Diagram of Shutdown

* The figures ① – ⑬ indicates the number of times the LED flashes when shutdown occurs in the corresponding route.

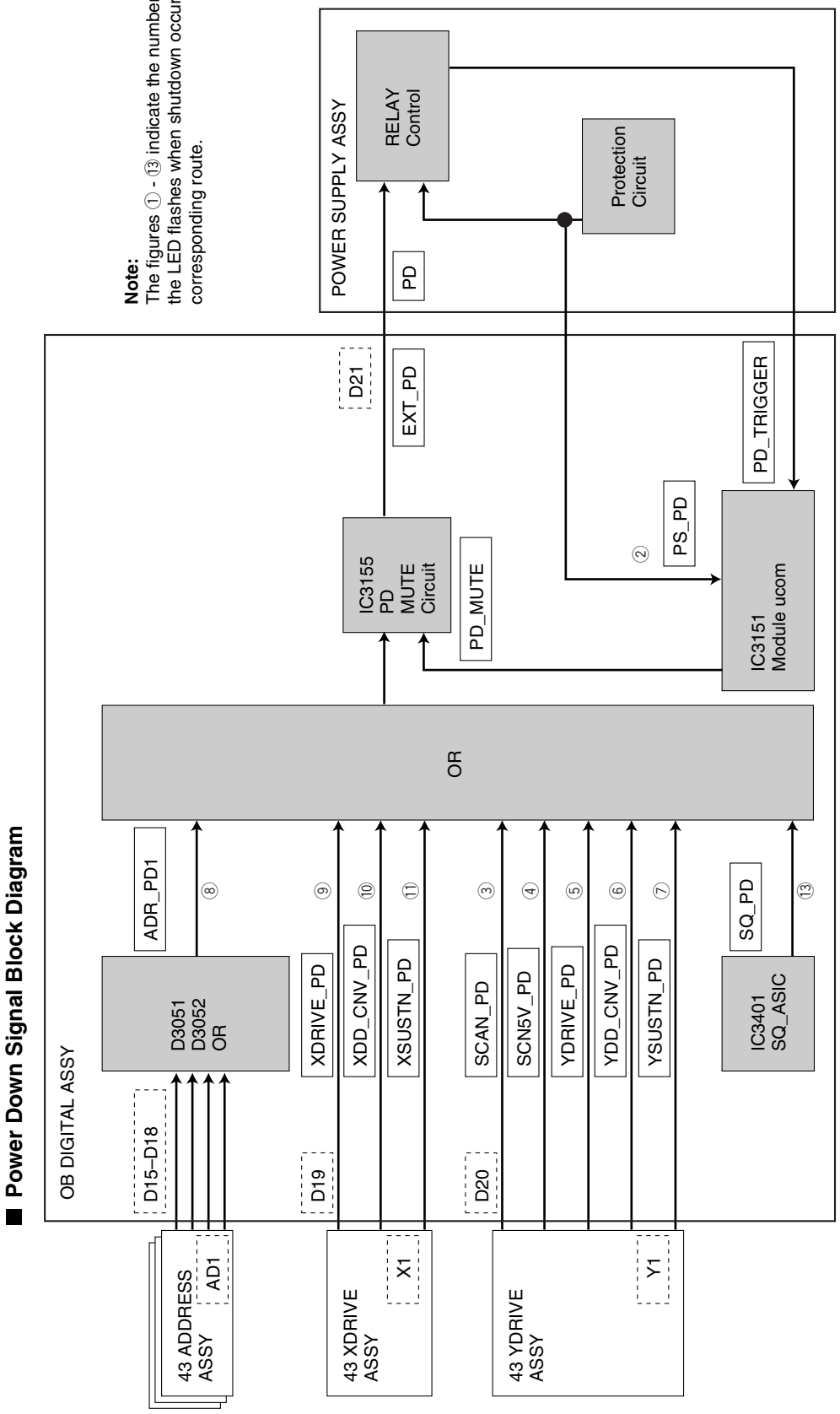


■ Shutdown diagnosis

LED's Flashing	Shutdown Operation	Defective Assy	Cause for Shutdown	Points to check	Possible defective parts	Remarks
Blue 1	Failure in communication with the Panel-Drive IC	OB DIGITAL	Failure in the Panel-Drive IC or its peripheral circuit	SQ ASIC BLOCK, PANEL FLASH BLOCK	IC3401, IC3301	
		OB DIGITAL	Failure in writing in the Panel-Drive IC		IC3401, IC3301	Turn the power back on then check if the version can be read with the QS1 command.
Blue 2	Failure in communication with the module IIC (Check the SD subcategory on the Factory menu.)	OB DIGITAL	Failure in the EEPROM (4 K) or its peripheral circuit	MODULE UCOM BLOCK	IC3156	
		OB DIGITAL	Failure in the DAC IC or its peripheral circuit	MODULE UCOM BLOCK	IC3157	
		AUDIO	Failure in the EEPROM(2K) or its peripheral circuit	AUDIO	IC3754	
		AUDIO	Failure in the Volume IC or its peripheral circuit	AUDIO	IC3753	
			Failure in an FPC or the periphery of the connector	Periphery of the FPC that connects between MA11 and D11		Check if the FPC is damaged or improperly connected.
			Failure in a cable or the periphery of the connector	Periphery of the cable that connects between MA8 and A2		Check if the cable is damaged or short-circuited.
Blue 3	Failure in the DIGTAL ASIC power supply	OB DIGITAL	Failure in the DC/DC converter	DIGITAL DD CON BLOCK	U3601	Check if 3.3 V and 1.2 V are activated (not short-circuited).
		OB DIGITAL	Failure in the RST	PANELFLASH BLOCK	IC3302, IC3304	
		POWER SUPPLY	12-V power not booted	POWER SUPPLY		
Blue 4	Panel high temperature	OB DIGITAL	Failure in a cable or the periphery of the connector	D24-TE1		Check if the cable is damaged, short-circuited, or disconnected.
		PANEL SENSOR	Failure in the thermistor or its peripheral circuit	PANEL SENSOR	TH8601	
			Panel high temperature	Ambient temperature		Temperature detected by the sensor is 90°C or higher.
Blue 5	Failure in audio		Speaker short-circuited	Speaker terminals		Check if speaker cables are short-circuited inside the unit.
		AUDIO	Failure in the AMP IC	AUDIO AMP	IC3751	
			Failure in an FPC or the periphery of the connector	Periphery of the FPC that connects between MA11 and D11		Check if the FPC is damaged or improperly connected.
			Failure in a cable or the periphery of the connector	Periphery of the cable that connects between MA8 and A2		Check if the cable is damaged or short-circuited.
Blue 6	Failure in communication with the module microcomputer	OB DIGITAL	Failure in the module UCOM or its peripheral circuit	MODULE UCOM BLOCK	IC3151	Check for short-circuited/open communication line (TXD_MAIN/RXD_MAIN).
		OB DIGITAL	Failure in writing in the module UCOM	MODULE UCOM BLOCK	IC5201	
			Failure in an FPC or the periphery of the connector	Periphery of the FPC that connects between MA11 and D11		Check if the FPC is damaged or improperly connected.
Blue 7	Failure in three-wire-serial communication with the main microcomputer (Check the SD subcategory on the Factory menu.)	OBE MAIN	Failure in the IF UCOM or its peripheral circuit	IFUCOM BLOCK	IC5002	Check for short-circuited/open communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
		OBE MAIN	Failure in the MULTI IC or its peripheral circuit	MULTI BLOCK	IC7001, IC7002	Check for short-circuited/open communication line (TXD_IC3/RXD_IC3/CLK_IC3/BUSY_IC3/CE_IC3)
		OBE MAIN	Failure in writing in the MULTI IC		IC7001, IC7002	
Blue 8	Failure in IIC communication with the main microcomputer	TUNER	Failure in the front end or its peripheral circuit	TUNER	U4401	Check for short-circuited/open communication line (SCL_AIR/SDA_AIR)
			Failure in the periphery of the connector	Periphery of the TU1 and MA1 connectors		Check if the cable is improperly connected.
		OBE MAIN	Failure in the AV_SW or its peripheral circuit	AV_SW BLOCK	IC4801	Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SCL_AV/SDA_AV)
		OBE MAIN	Failure in the RGB_SW or its peripheral circuit	RGB_SW BLOCK	IC4703	Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SCL_AV/SDA_AV)
		TUNER	Failure in the MPX or its peripheral circuit	MPX	IC4401	Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SDA_AV/SCL_AV)
		OBE MAIN	Failure in the 3.3 V-5 V conversion circuit	MAIN_UCOM BLOCK	Q5201	
		OBE MAIN	Failure in the TXT UCOM or its peripheral circuit	TXT UCOM BLOCK	IC5405	Check for short-circuited/open communication line (SCL_MA/SDA_MA)
		OBE MAIN	Failure in the M-VDEC or its peripheral circuit	VDEC BLOCK	IC6003	Check for short-circuited/open communication line (SCL_MA/SDA_MA)
		OBE MAIN	Failure in the ADC or its peripheral circuit	ADC BLOCK	IC6201	Check for short-circuited/open communication line (SCL_MA/SDA_MA)
		OBE MAIN	Failure in the MA-EEP or its peripheral circuit	MAIN_UCOM BLOCK	IC5202	Check for short-circuited/open communication line (SCL_EP/SDA_EP)
Blue 9	Failure in communication with the main microcomputer	OBE MAIN	Failure in the main UCOM or its peripheral circuit	MAIN_UCOM BLOCK	IC5206, IC5207	Check for short-circuited/open communication line (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
		OBE MAIN	Failure in writing in the main UCOM	MAIN_UCOM BLOCK	IC5206, IC5207	
Blue 10	Failure in the fan	FAN	Failure in the fan motor or stoppage of the fan caused by adherence of dirt	FAN		
			Failure in a cable or the periphery of the connector	MA12		Check if the cable is disconnected or improperly connected.
Blue 11	Unit high temperature		Use in a high ambient temperature	Ambient temperature		Temperature detected by the sensor is 65°C or higher.
			Failure in the thermistor or its peripheral circuit		TH7601	
			Failure in a cable or the periphery of the connector	MA6-SR1		Check if the cable is damaged, short-circuited, or disconnected.
Blue 12	Failure in the digital tuner Note: The unit will not be shut off. The log is recorded only.	DIGITAL TUNER	Failure in the system IC or its peripheral circuit		IC2000	Check for short-circuited/open communication line (TXD_DT/RXD_DT)
			Failure in a signal-system flexible cable or in the periphery of the connector	MA3-D1		Check if the flexible cable is damaged or improperly connected.
			Failure in a power-supply-system cable or in the periphery of the connector	PS3-D5		Check if the cable is damaged, short-circuited, or disconnected.
Blue 13	Failure in the MAIN ASIC power supply		Failure in a cable or the periphery of the connector	D12-MA10		Check if the cable is damaged, short-circuited, or disconnected.
		OB DIGITAL	Failure in the DC/DC converter	DIGITAL DD CON BLOCK	U3601	Check if 3.3 V and 1.2 V are activated (not short-circuited).
		OBE MAIN	Failure in the RST IC	MAIN_UCOM BLOCK	IC5211, IC5212, IC5213	Check if 3.3 V, 1.8 V and 1.2 V are activated (not short-circuited).
		POWER SUPPLY	12-V power not booted	POWER SUPPLY		

7.1.3 DIAGNOSIS OF PD (POWER-DOWN)

Note:
The figures ① - ⑬ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



• DIAGNOSIS OF POWER DOWN (FAILURE POINT)

LED Flashing times	Operation PD	Failure PCB Assy	PD Summary	Confirming Point	Assumed Failure Parts	Remarks
2	POWER	POWER SUPPLY				
3	SCAN	43 SCAN A, B	VH UVP	SCAN IC	SCAN IC	VH-GNDH Short Cut
		43 Y DRIVE		Y SUS BLOCK	IC2252, IC2253	VSUS-SUSOUT, SUSOUT-SUSGND Short Cut
				VH DC/DC	IC2502, L2501	
			Detection of Connector loosing out	CN2001, CN2350		
		43 X DRIVE	VH UVP	IC1202	IC1202	VSUS-SUSOUT, SUSOUT-SUSGND Short Cut
4	SCN-5V	43 SCAN A, B	Detection of Connector loosing out	CN2401, CN2402		
		43 Y DRIVE	IC5V UVP	SCAN IC	SCAN IC	
				IC5V DC/DC	Q2605, R2647	
				Y SUS BLOCK	R2352	
6	Y-DCDC	43 Y DRIVE	VOFS UVP	VOFS DC/DC	Q2606, R2619, R2620	
				Y SUS BLOCK	IC2252, IC2253, Q2280, Q2281	MSKS-SUSOUT Short Cut
			Vprst UVP	Vprst Regulator	Q2531, Q2532, IC2535	
7	Y-SUS	43 Y DRIVE	Detecting PD of mid-point voltage	Y RESONANCE BLOCK	IC2101	
				Y SUS BLOCK	Q2221	
8	ADRS	43 ADDRESS	Address PD	ADDRESS RESONANCE BLOCK	D1634	V+ADR-GND_ADR Short Cut
			Detection of Connector loosing out	CN1501, CN3501-CN3504		
9	XDRIVE	43 X DRIVE	Detection of Connector loosing out	CN1001		
10	X-DCDC	43 X DRIVE	Detection of Connector loosing out	CN1201		
			VRN UVP	VRN DC/DC	Q1323, R1332, R1333	
				X SUS BLOCK	R1204, Q1272	
11	X-SUS	43 X DRIVE	Detecting PD of mid-point voltage	X RESONANCE BLOCK	IC1101	
13	SQ	OB DIGITAL	Drive sequence stop	SQ ASIC BLOCK	IC3401	

OVP : OVER VOLTAGE PROTECT
UVP : UNDER VOLTAGE PROTECT

7.1.4 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function: To prevent a power-down from being generated, operation of only the digital-signal processing and audio circuits are enabled, and power is not supplied to the panel driving system (large-signal system).

Usages: 1. In a case where a check is required of signals' being correctly output to the driving systems during a repair, etc.
2. In a case where diagnosis is required for judging whether the power to the large-signal system or small-signal system has been down when a power-down occurred.
3. In a case where micro-computer is required to rewrite.

Methods: 1. Short-circuit the test point K7601 (DRF) of the SR Assy and GND (see Fig. 4 below).
2. Issue the "DRV S00" RS-232C command. (Command for turning the function off: DRV S01)

Notes:
- When the power to the large-signal system is off, as the PD signal is muted, power-downs other than PS_PD are not activated.
- As soon as the clips are removed while the power to the large-signal system is off, a power-down will occur. Be sure to turn the power off before removing the clips.
- While this function is activated with RS-232C commands, it is possible to issue "DRV S01" (for turning the function off) while the power is on. However, as it may damage the unit, turn the power off before issuing the "DRV S01" command.
- Although the "DRV S00/S01" RS-232C commands are valid during Standby mode, once the main power is turned off, the unit will return to "DRV S01."

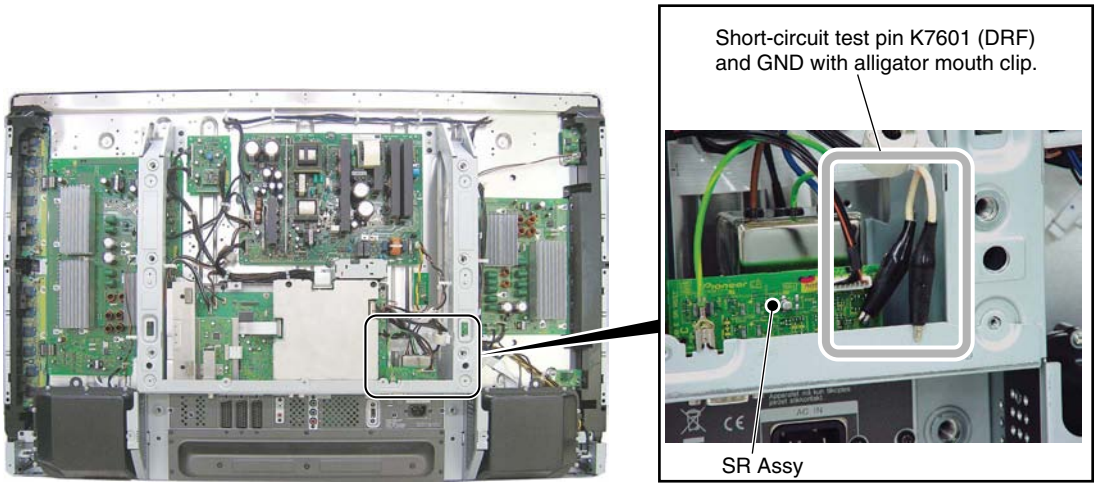


Fig. 4 Position of DRIVE OFF

7.1.5 BACKUP WHEN THE PANEL UNIT IS ADJUSTED

■ Outline

Adjustment data set at the factory are stored in the EEPROM (IC3156/4K) on the OB DIGITAL Assy. Those adjustment data are automatically backed up in the EEPROM (backup EEPROM: IC3754) on the AUDIO Assy. Therefore, even if the OB DIGITAL Assy is replaced, the adjustment data can be restored by copying the backup data, which enables you to omit newly performing adjustments on the panel unit.

■ Data to be backed up

- Voltage margin adjustment values
- Data on the hour meter
- Upper limit of power-adjustment value
- Data on the pulse meter
- Panel WB adjustment values
- Serial number
- Drive waveform adjustment values
- Data of the P-ON counter
- PD/SD histories

■ How to copy the backup data

1. When the OB DIGITAL Assy is replaced with that for service (normal servicing)
   (In a case where no data are on the DIG. EEP, and backup data have been adjusted)

   Command: "BCP" (Effective during FAY)
   Factory Menu

   PANEL INFORMATION
   ▼ (down)
   • • •
   ▼ (down)
   ETC. (+)
   [set]
   BACKUP DATA: NO OPRT
   >> (right)
   BACKUP DATA: TRANSFER
   [set] (Press and hold for 5 seconds.)

   - After the OB DIGITAL Assy is replaced with that for service, check that "DIG. EEP: NO DATA!" is displayed on the Panel Information screen of the Factory Menu.
   - If this command is not executed, the red LED lights, and the blue LED flashes, to warn you that copying of the backup adjustment data for the panel unit failed.
   - If both the OB DIGITAL Assy and AUDIO Assy are to be replaced, first replace the AUDIO Assy and set the unit to Standby mode. Then replace the OB DIGITAL Assy.

2. In a case where a OB DIGITAL Assy that was mounted on another unit is to be reused as a service part.

   Command: "FAJ" (Effective during FAY)
   Factory Menu: PANEL FACT => ETC => DIGITAL EEPROM: DELETE

   PANEL INFORMATION
   ▼ (down)
   • • •
   ▼ (down)
   ETC. (+)
   [set]
   BACKUP DATA: NO OPRT
   ▼ (down)
   DIGITAL EEPROM: NO OPRT
   >> (right)
   DIGITAL EEPROM: REPAIR
   [set] (Press and hold for 5 seconds.)

   - If the OB DIGITAL Assy of Unit 1 is mounted to be reused in Unit 2 to be repaired, and Unit 2 enters Standby mode, the adjustment data and histories stored in Unit 1 are erased, and those of Unit 2 are copied. Once overwritten, the original data will not be restored. After the Assy is replaced, be sure to enter Factory mode, using the remote control unit for servicing, and perform the procedures described herein. Or, before mounting an Assy to be reused as a service Assy, perform these procedures then mount it on the product to be repaired.

3. In a case where the OB DIGITAL Assy is replaced with one for servicing because of a defective EEPROM on the original Assy and manual adjustments are to be performed
(In a case where no data are stored in the OB DIGITAL Assy or as backup, and the values that have been manually adjusted on Service Menu are to be applied as adjustment data for the panel unit)

Command: "UAJ" (Effective during FAY)
Factory Menu

PANEL INFORMATION
▼ (down)
•••
▼ (down)
ETC. (+)
[set]
BACKUP DATA: NO OPRT
▼ (down)
DIGITAL EEPROM: NO OPRT
>> (right)
DIGITAL EEPROM: REPAIR
[set] (Press and hold for 5 seconds.)

- If the OB DIGITAL Assy with which adjustment data for the panel unit have been copied is mounted, the above procedures are not necessary after manual adjustment.
(The indication "DIGITAL EEPROM: REPAIR" will not be displayed.)

7.1.6 HOW TO CLEAR HISTORY DATA

■ Clearing data on various histories when the OB DIGITAL Assy is replaced

Other than adjustment data for the panel unit, data to be backed up include the accumulated power-on time and a history of defective parts, which are data updated and stored in memory. Among those data, some are required to be cleared when the OB DIGITAL Assy is replaced for servicing, as shown below:

Item	Backed-up data	Type of servicing			RS-232C command
		Panel replacement	Replacement of the power-supply block	Others	
Hour meter	Accumulated display	To be cleared	Not to be cleared	Not to be cleared	CHM
SD history	Point where an SD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CSD
PD history	Point where a PD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CPD
Pulse meter	Accumulated number of pulses of the Panel (5 blocks)	To be cleared (essential)	Not to be cleared	Not to be cleared	CPM
Accumulated number of power-ons	Accumulated number of RELAY_ONs	Not to be cleared	To be cleared (essential)	Not to be cleared	CPC

Notes:

1: With the PDP-436SXE/RXE and subsequent models, because various compensation functions use pulse-meter data for calculating compensation values, if related Assys are replaced, data on various histories must be cleared.

2: To clear data using RS-232C commands, after entering Factory mode (by sending FAY or PFY), issue a corresponding command. Otherwise, the command will not be executed.

How to clear the history for each item on the Factory Menu

Start point of Panel Factory

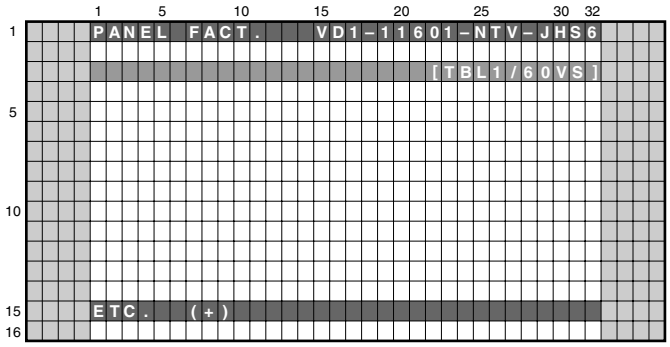
PANEL INFORMATION

▼ (down)

• • •

▼ (down)

ETC. (+)



[set]

BACKUP DATA

▼ (down)

DIGITAL EEPROM

▼ (down)

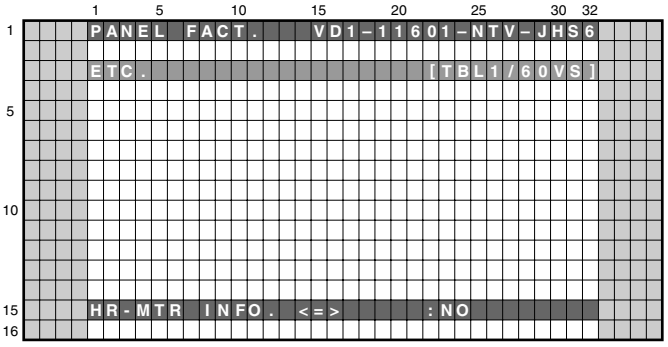
Clearing the PD history: PD INFO: NO OPRT >> (right) PD INFO: CLEAR
[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the SD history: SD INFO: NO OPRT >> (right) SD INFO: CLEAR
[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the data on the hour meter: HR-MTR INFO: NO OPRT >> (right) HR-MTR INFO: CLEAR
[set] (Press and hold for 5 seconds.)



▼ (down)

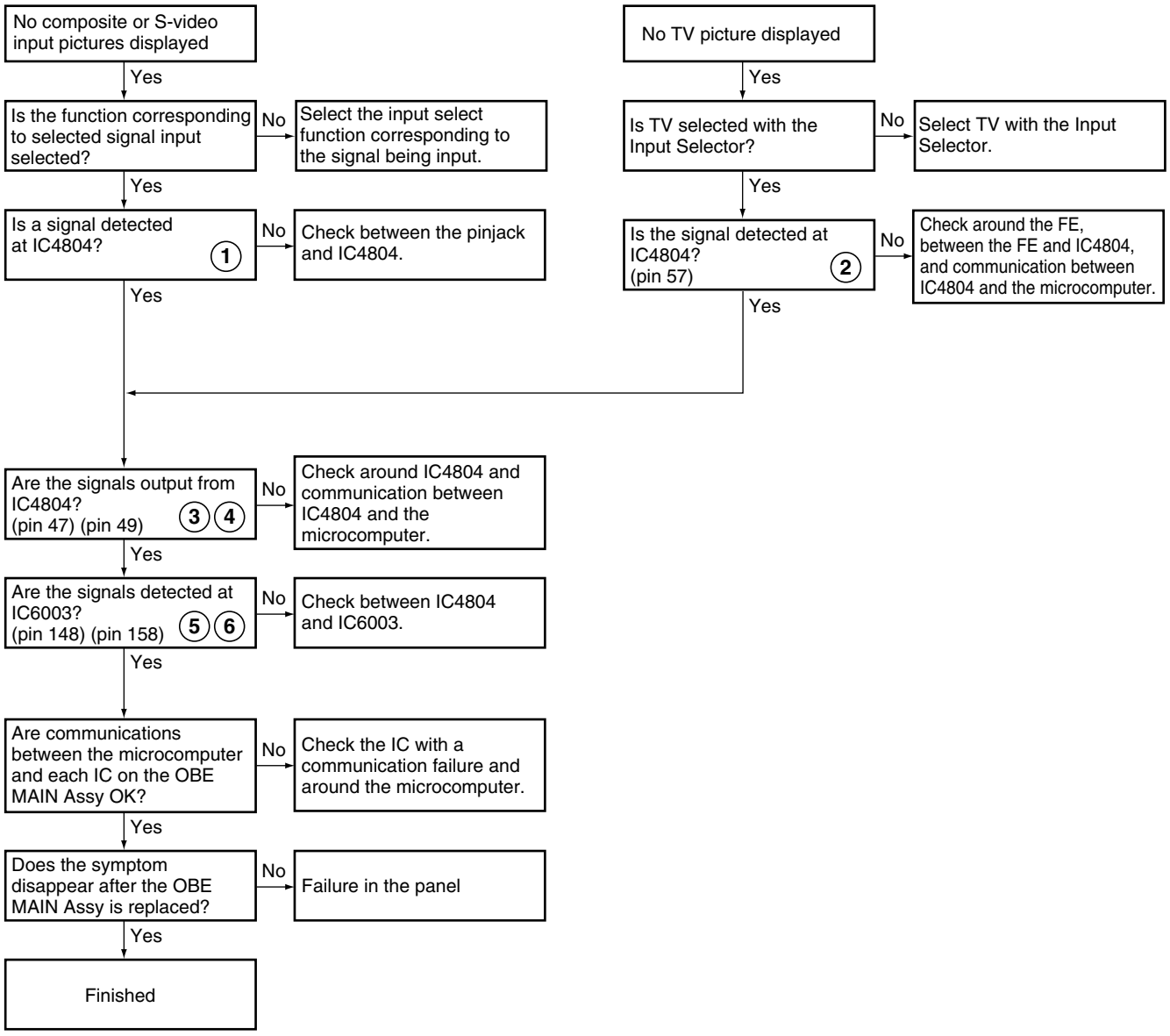
Clearing the data on the pulse meter: PM/B1-BS INFO: NO OPRT >> (right) PM/B1-BS INFO: CLEAR
[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the data on the number of power-ons: P COUNT INFO: NO OPRT >> (right) P COUNT INFO: CLEAR
[set] (Press and hold for 5 seconds.)

7.1.7 TROUBLESHOOTING

● No composite or S-video input pictures displayed


No composite or S-video input pictures displayed
Yes
Is the function corresponding to selected signal input selected?
No
Select the input select function corresponding to the signal being input.
Yes
Is a signal detected at IC4804? (1)
No
Check between the pinjack and IC4804.
Yes
No TV picture displayed
Yes
Is TV selected with the Input Selector?
No
Select TV with the Input Selector.
Yes
Is the signal detected at IC4804? (pin 57) (2)
No
Check around the FE, between the FE and IC4804, and communication between IC4804 and the microcomputer.
Yes
Are the signals output from IC4804? (pin 47) (pin 49) (3) (4)
No
Check around IC4804 and communication between IC4804 and the microcomputer.
Yes
Are the signals detected at IC6003? (pin 148) (pin 158) (5) (6)
No
Check between IC4804 and IC6003.
Yes
Are communications between the microcomputer and each IC on the OBE MAIN Assy OK?
No
Check the IC with a communication failure and around the microcomputer.
Yes
Does the symptom disappear after the OBE MAIN Assy is replaced?
No
Failure in the panel
Yes
Finished

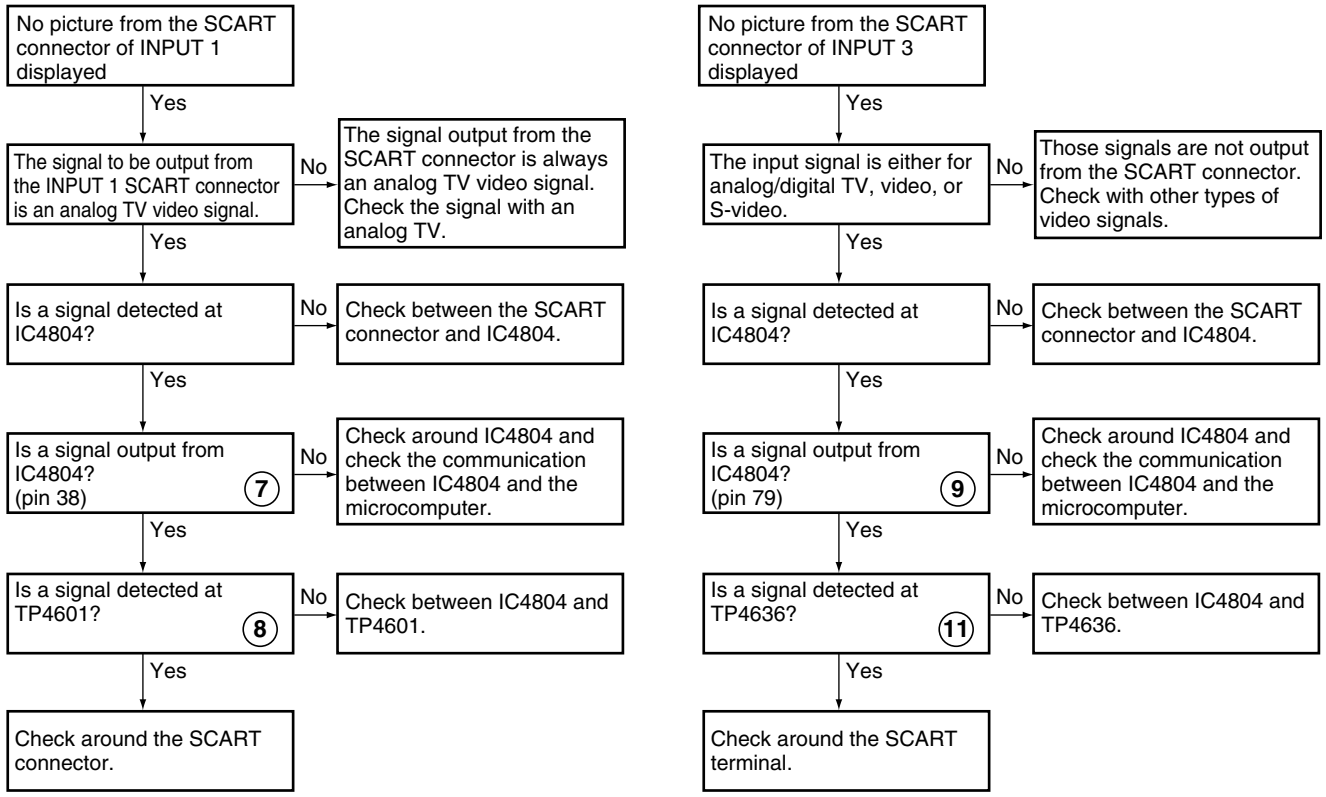
Note:

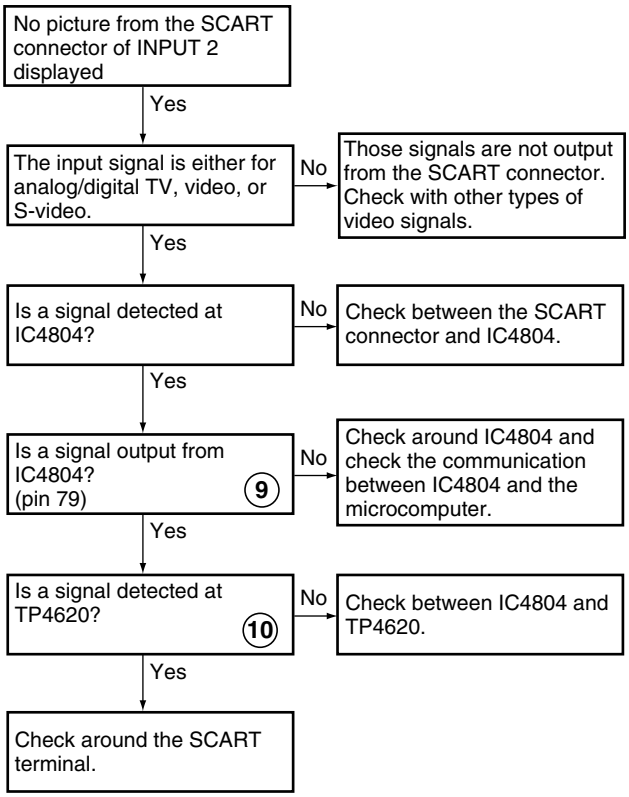
- Diagnosis points

OBE MAIN ASSY

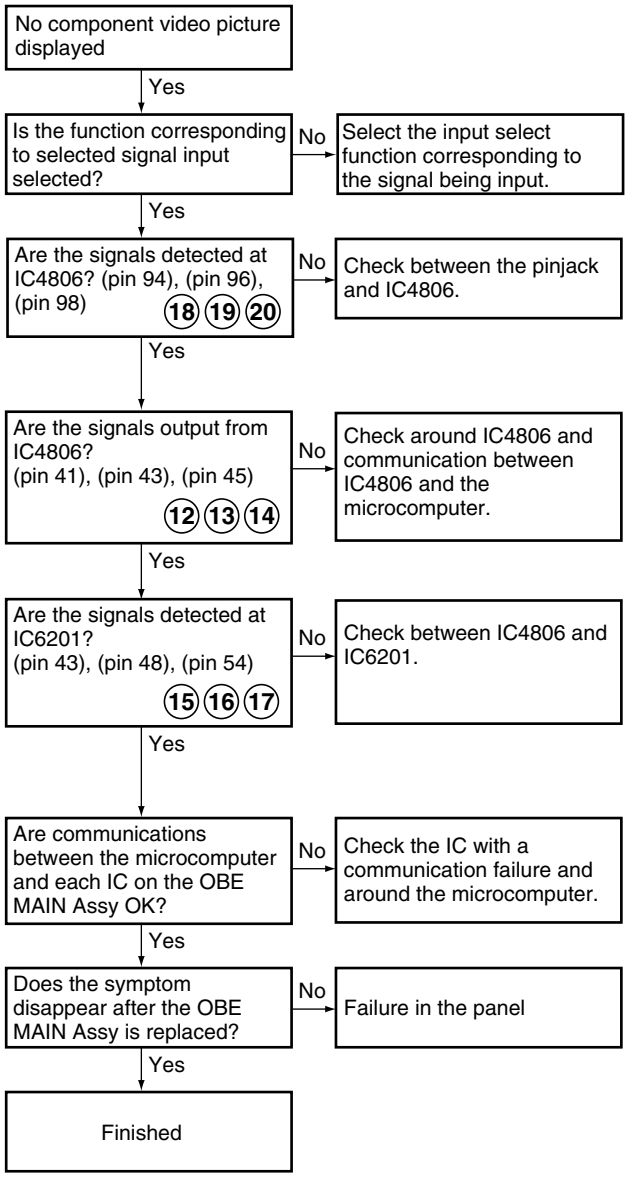
- For check the communication with the microcomputer, refer to the section 6.3 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

● No picture from the SCART connector displayed

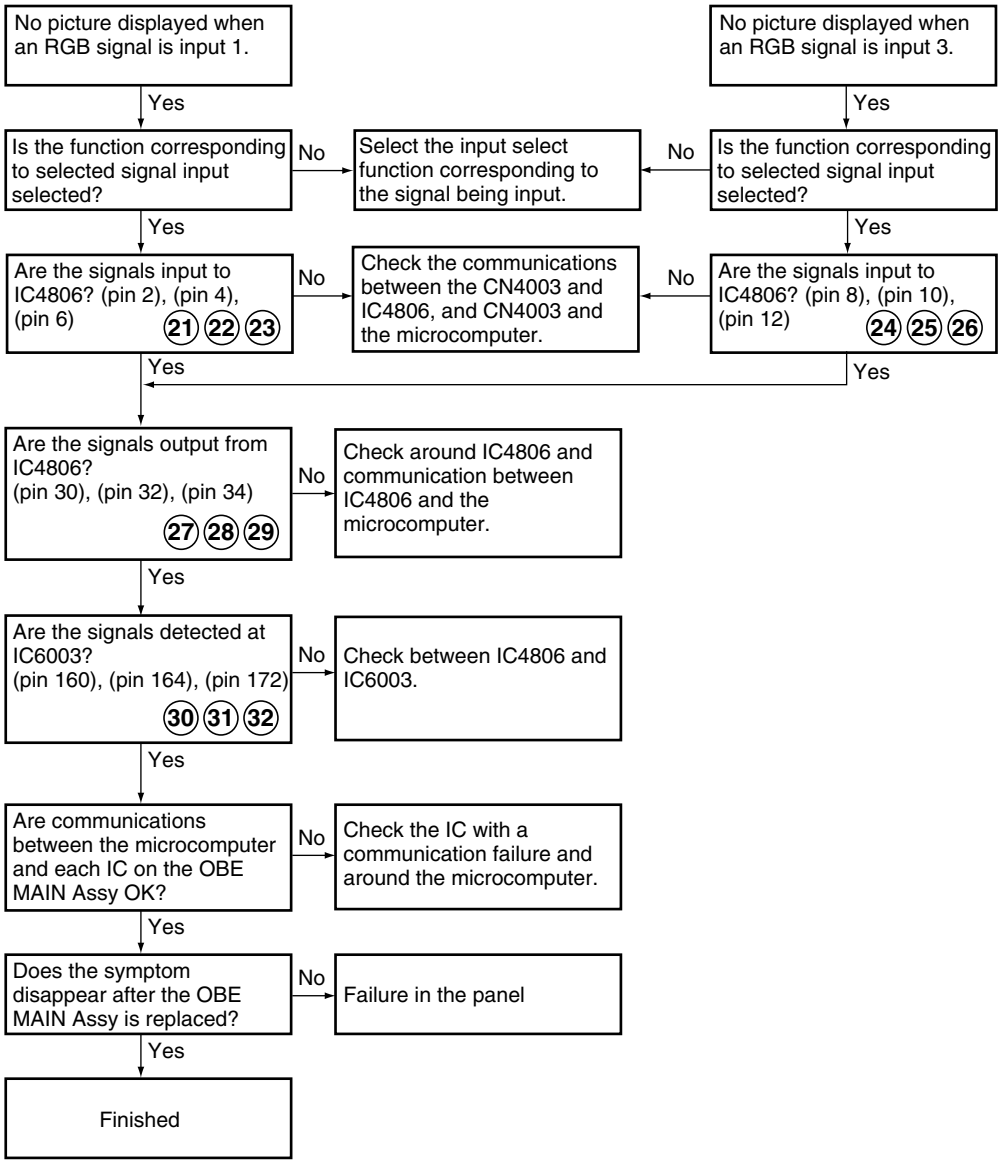

No picture from the SCART connector of INPUT 1 displayed
Yes
The signal to be output from the INPUT 1 SCART connector is an analog TV video signal.
No
The signal output from the SCART connector is always an analog TV video signal. Check the signal with an analog TV.
Yes
Is a signal detected at IC4804?
No
Check between the SCART connector and IC4804.
Yes
Is a signal output from IC4804? (pin 38) (7)
No
Check around IC4804 and check the communication between IC4804 and the microcomputer.
Yes
Is a signal detected at TP4601? (8)
No
Check between IC4804 and TP4601.
Yes
Check around the SCART connector.
No picture from the SCART connector of INPUT 3 displayed
Yes
The input signal is either for analog/digital TV, video, or S-video.
No
Those signals are not output from the SCART connector. Check with other types of video signals.
Yes
Is a signal detected at IC4804?
No
Check between the SCART connector and IC4804.
Yes
Is a signal output from IC4804? (pin 79) (9)
No
Check around IC4804 and check the communication between IC4804 and the microcomputer.
Yes
Is a signal detected at TP4636? (11)
No
Check between IC4804 and TP4636.
Yes
Check around the SCART terminal.


No picture from the SCART connector of INPUT 2 displayed
Yes
The input signal is either for analog/digital TV, video, or S-video.
No
Those signals are not output from the SCART connector. Check with other types of video signals.
Yes
Is a signal detected at IC4804?
No
Check between the SCART connector and IC4804.
Yes
Is a signal output from IC4804? (pin 79) (9)
No
Check around IC4804 and check the communication between IC4804 and the microcomputer.
Yes
Is a signal detected at TP4620? (10)
No
Check between IC4804 and TP4620.
Yes
Check around the SCART terminal.

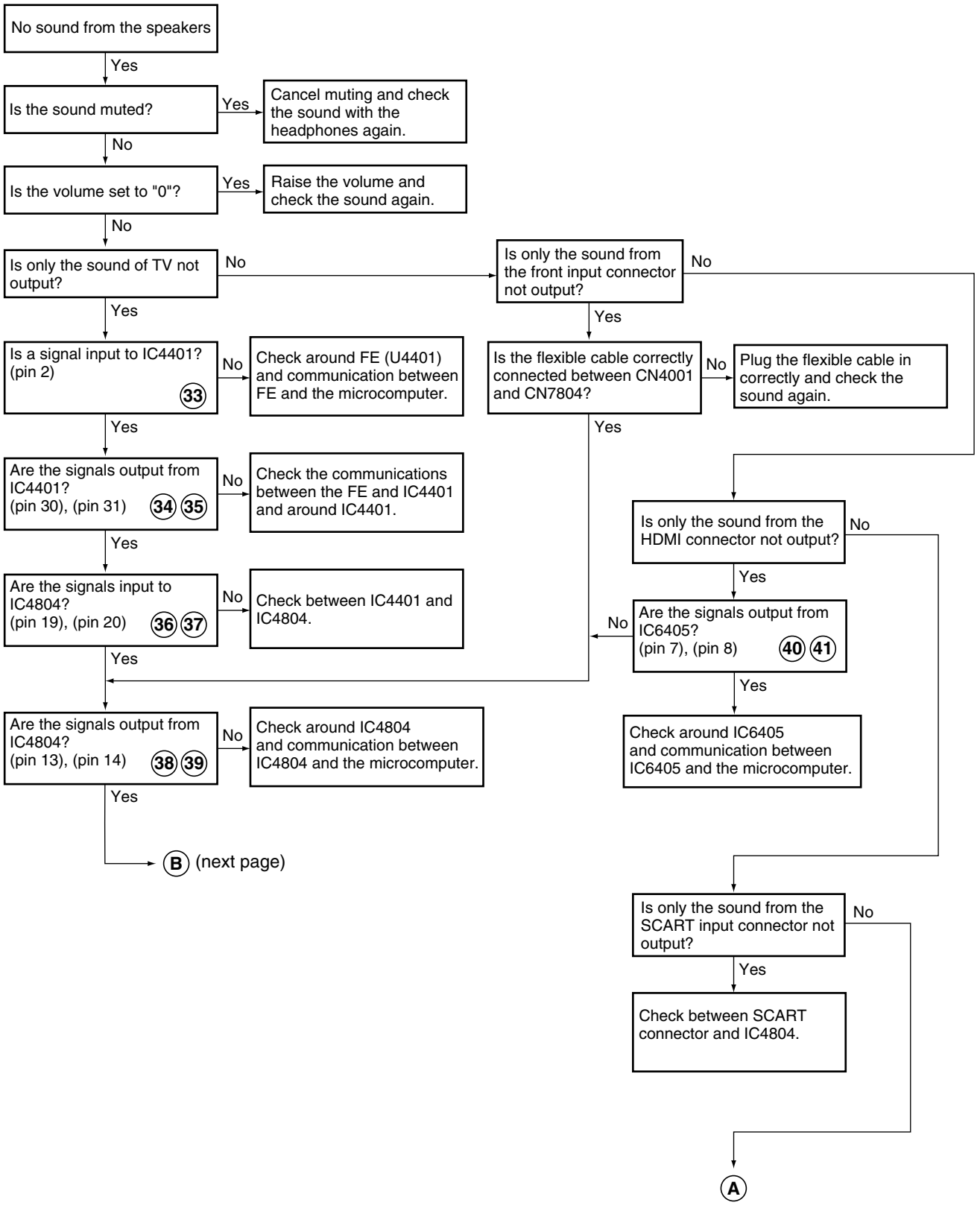
● No component video picture displayed


No component video picture displayed
Yes
Is the function corresponding to selected signal input selected?
No
Select the input select function corresponding to the signal being input.
Yes
Are the signals detected at IC4806? (pin 94), (pin 96), (pin 98) 18 19 20
No
Check between the pinjack and IC4806.
Yes
Are the signals output from IC4806? (pin 41), (pin 43), (pin 45) 12 13 14
No
Check around IC4806 and communication between IC4806 and the microcomputer.
Yes
Are the signals detected at IC6201? (pin 43), (pin 48), (pin 54) 15 16 17
No
Check between IC4806 and IC6201.
Yes
Are communications between the microcomputer and each IC on the OBE MAIN Assy OK?
No
Check the IC with a communication failure and around the microcomputer.
Yes
Does the symptom disappear after the OBE MAIN Assy is replaced?
No
Failure in the panel
Yes
Finished

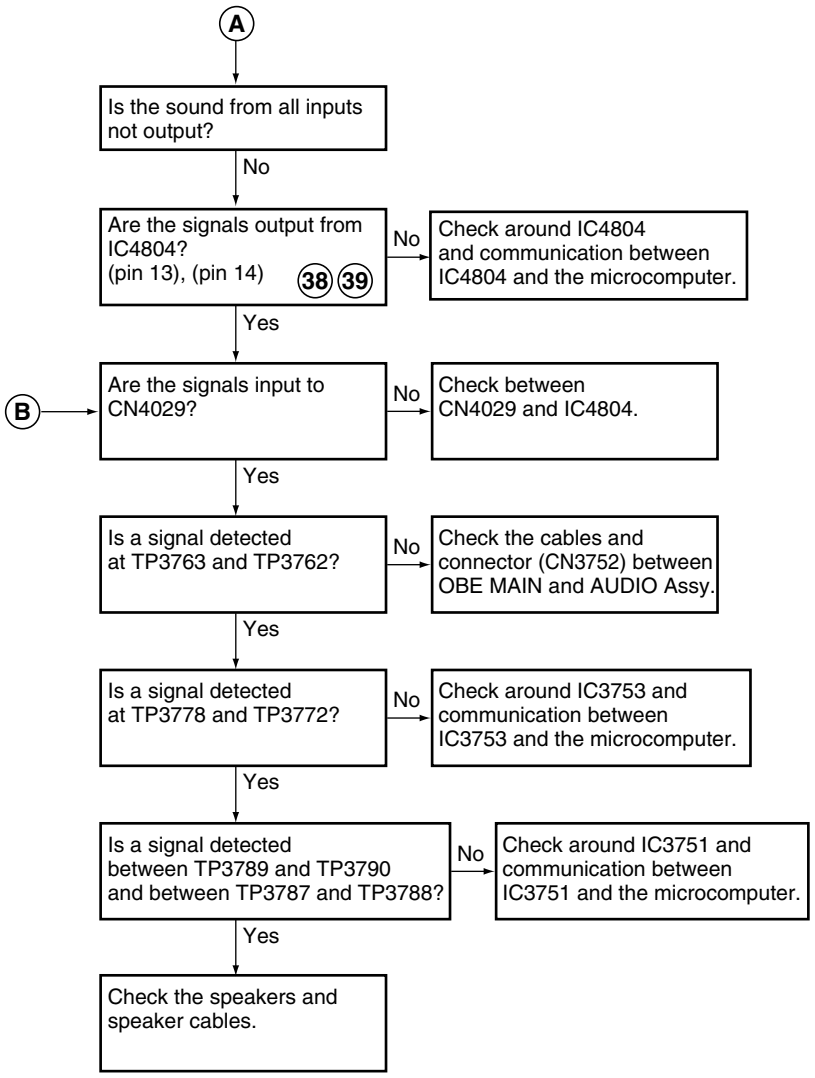
● No picture displayed when an RGB signal is input


No picture displayed when an RGB signal is input 1.
Yes
Is the function corresponding to selected signal input selected?
No
Select the input select function corresponding to the signal being input.
No picture displayed when an RGB signal is input 3.
Yes
Is the function corresponding to selected signal input selected?
No
Yes
Yes
Are the signals input to IC4806? (pin 2), (pin 4), (pin 6) 21 22 23
No
Check the communications between the CN4003 and IC4806, and CN4003 and the microcomputer.
Are the signals input to IC4806? (pin 8), (pin 10), (pin 12) 24 25 26
No
Yes
Yes
Are the signals output from IC4806? (pin 30), (pin 32), (pin 34) 27 28 29
No
Check around IC4806 and communication between IC4806 and the microcomputer.
Yes
Are the signals detected at IC6003? (pin 160), (pin 164), (pin 172) 30 31 32
No
Check between IC4806 and IC6003.
Yes
Are communications between the microcomputer and each IC on the OBE MAIN Assy OK?
No
Check the IC with a communication failure and around the microcomputer.
Yes
Does the symptom disappear after the OBE MAIN Assy is replaced?
No
Failure in the panel
Yes
Finished

● No sound from the speakers (1/2)

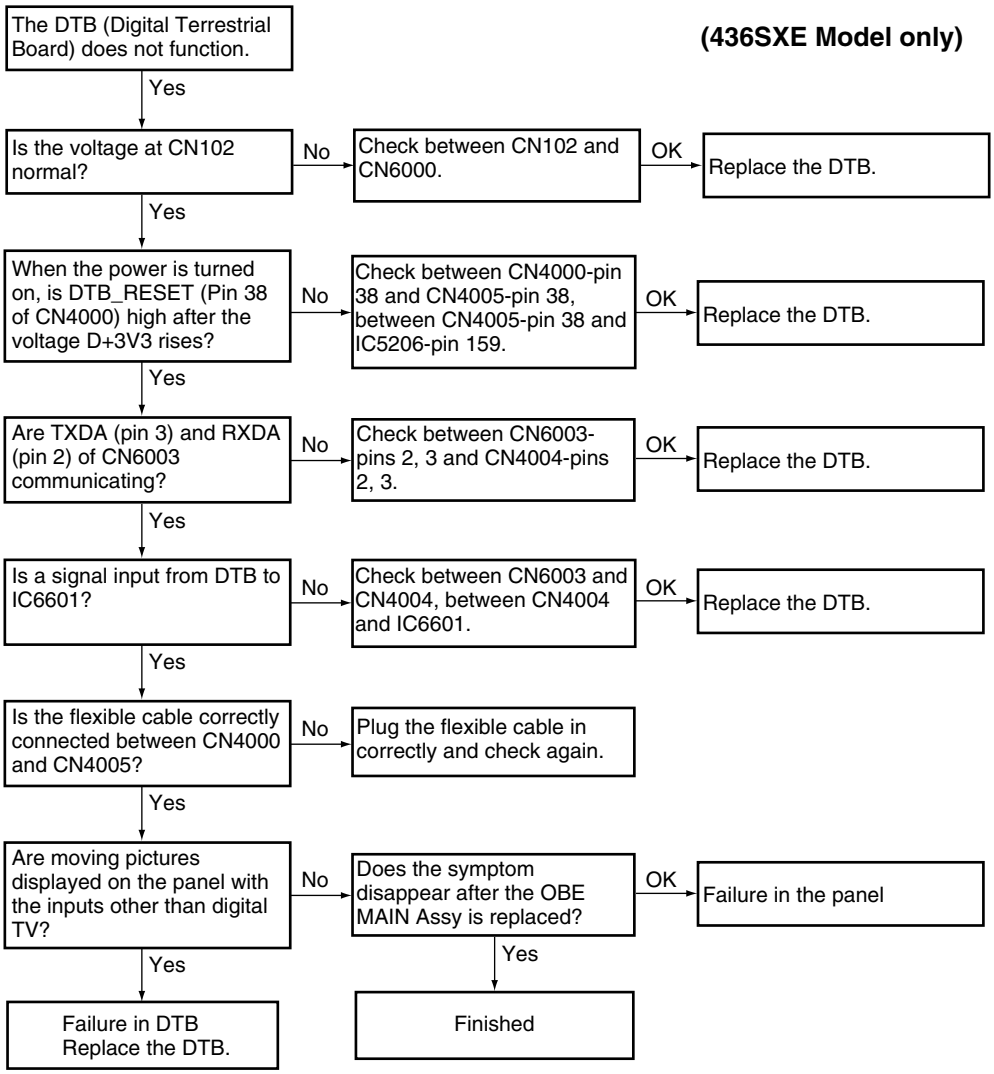

No sound from the speakers
Yes
Is the sound muted?
Yes
Cancel muting and check the sound with the headphones again.
No
Is the volume set to "0"?
Yes
Raise the volume and check the sound again.
No
Is only the sound of TV not output?
No
Is only the sound from the front input connector not output?
No
Yes
Yes
Is a signal input to IC4401? (pin 2) 33
No
Check around FE (U4401) and communication between FE and the microcomputer.
Is the flexible cable correctly connected between CN4001 and CN7804?
No
Plug the flexible cable in correctly and check the sound again.
Yes
Yes
Are the signals output from IC4401? (pin 30), (pin 31) 34 35
No
Check the communications between the FE and IC4401 and around IC4401.
Is only the sound from the HDMI connector not output?
No
Yes
Yes
Are the signals input to IC4804? (pin 19), (pin 20) 36 37
No
Check between IC4401 and IC4804.
Are the signals output from IC6405? (pin 7), (pin 8) 40 41
No
Yes
Yes
Are the signals output from IC4804? (pin 13), (pin 14) 38 39
No
Check around IC4804 and communication between IC4804 and the microcomputer.
Check around IC6405 and communication between IC6405 and the microcomputer.
Yes
B (next page)
Is only the sound from the SCART input connector not output?
No
Yes
Check between SCART connector and IC4804.
A

● No sound from the speakers (2/2)


A
Is the sound from all inputs not output?
No
Are the signals output from IC4804? (pin 13), (pin 14)
38
39
No
Check around IC4804 and communication between IC4804 and the microcomputer.
Yes
B
Are the signals input to CN4029?
No
Check between CN4029 and IC4804.
Yes
Is a signal detected at TP3763 and TP3762?
No
Check the cables and connector (CN3752) between OBE MAIN and AUDIO Assy.
Yes
Is a signal detected at TP3778 and TP3772?
No
Check around IC3753 and communication between IC3753 and the microcomputer.
Yes
Is a signal detected between TP3789 and TP3790 and between TP3787 and TP3788?
No
Check around IC3751 and communication between IC3751 and the microcomputer.
Yes
Check the speakers and speaker cables.

● The DTB (Digital Terrestrial Board) does not function

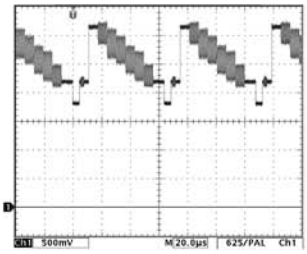
(436SXE Model only)


The DTB (Digital Terrestrial Board) does not function.
Yes
Is the voltage at CN102 normal?
No
Check between CN102 and CN6000.
OK
Replace the DTB.
Yes
When the power is turned on, is DTB_RESET (Pin 38 of CN4000) high after the voltage D+3V3 rises?
No
Check between CN4000-pin 38 and CN4005-pin 38, between CN4005-pin 38 and IC5206-pin 159.
OK
Replace the DTB.
Yes
Are TXDA (pin 3) and RXDA (pin 2) of CN6003 communicating?
No
Check between CN6003-pins 2, 3 and CN4004-pins 2, 3.
OK
Replace the DTB.
Yes
Is a signal input from DTB to IC6601?
No
Check between CN6003 and CN4004, between CN4004 and IC6601.
OK
Replace the DTB.
Yes
Is the flexible cable correctly connected between CN4000 and CN4005?
No
Plug the flexible cable in correctly and check again.
Yes
Are moving pictures displayed on the panel with the inputs other than digital TV?
No
Does the symptom disappear after the OBE MAIN Assy is replaced?
OK
Failure in the panel
Yes
Yes
Failure in DTB Replace the DTB.
Finished

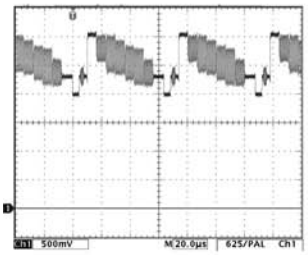
● Waveforms for Troubleshooting

OBE MAIN ASSY

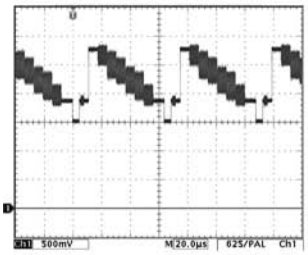
1 **IC4804**
V: 500mV/div. H: 20µsec/div.



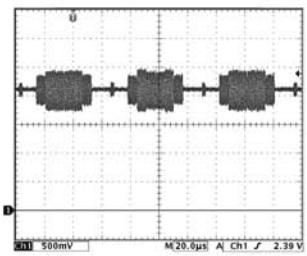
2 **IC4804-pin 57**
V: 500mV/div. H: 20µsec/div.



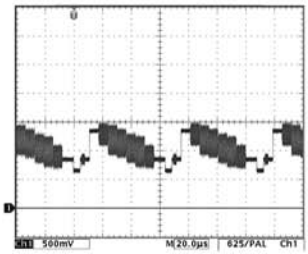
3 **IC4804-pin 47**
V: 500mV/div. H: 20µsec/div.



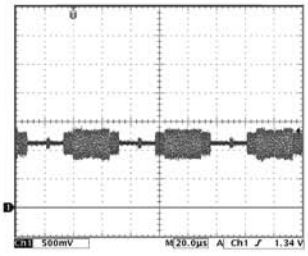
4 **IC4804-pin 49**
V: 500mV/div. H: 20µsec/div.



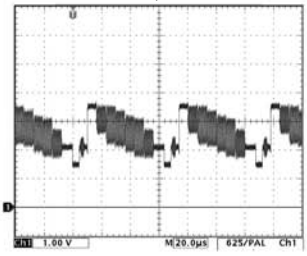
5 **IC6003-pin 148**
V: 500mV/div. H: 20µsec/div.



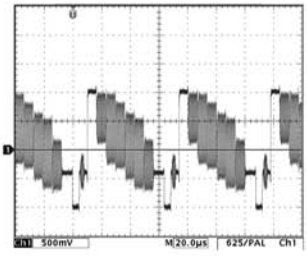
6 **IC6003-pin 158**
V: 500mV/div. H: 20µsec/div.



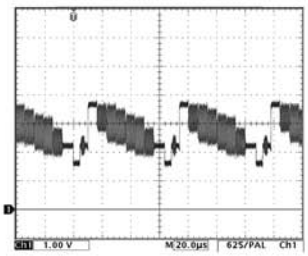
7 **IC4804-pin 38**
V: 1V/div. H: 20µsec/div.



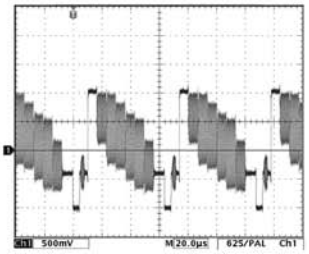
8 **TP4601**
V: 500mV/div. H: 20µsec/div.



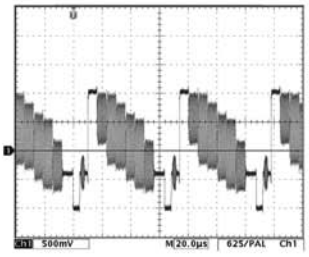
9 **IC4804-pin 79**
V: 1V/div. H: 20µsec/div.



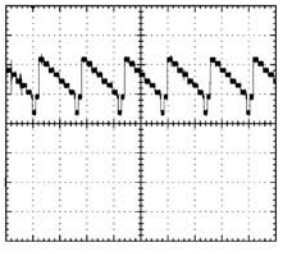
10 **TP4620**
V: 500mV/div. H: 20µsec/div.



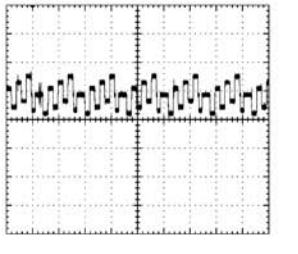
11 **TP4636**
V: 500mV/div. H: 20µsec/div.



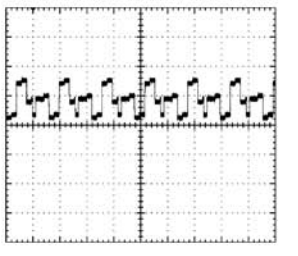
12 **IC4806-pin 41**
V: 500mV/div. H: 20µsec/div.



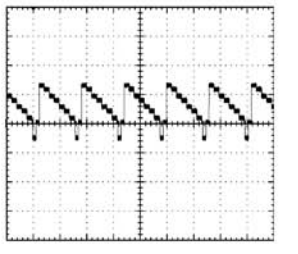
13 **IC4806-pin 45**
V: 500mV/div. H: 20µsec/div.



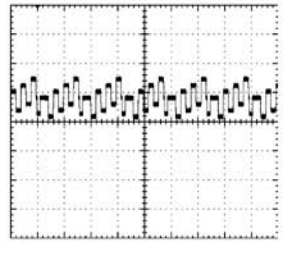
14 **IC4806-pin 45**
V: 500mV/div. H: 20µsec/div.



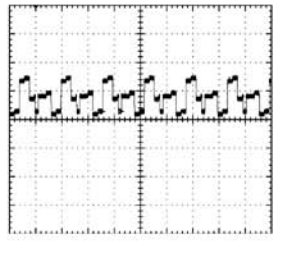
15 **IC6201-pin 43**
V: 500mV/div. H: 20µsec/div.



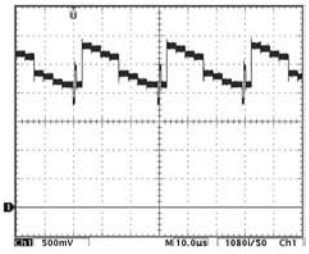
16 **IC6201-pin 48**
V: 500mV/div. H: 20µsec/div.



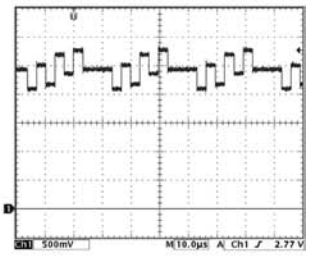
17 **IC6201-pin 54**
V: 500mV/div. H: 20µsec/div.



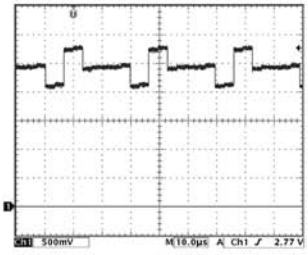
18 **IC4806-pin 96**
V: 500mV/div. H: 10µsec/div.



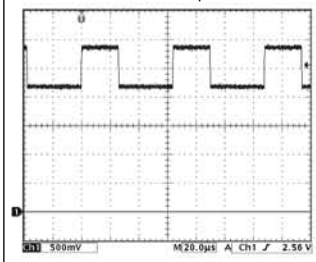
19 **IC4806-pin 98**
V: 500mV/div. H: 10µsec/div.



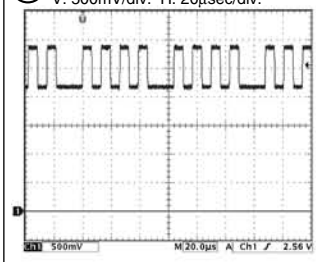
20 **IC4806-pin 64**
V: 500mV/div. H: 10µsec/div.



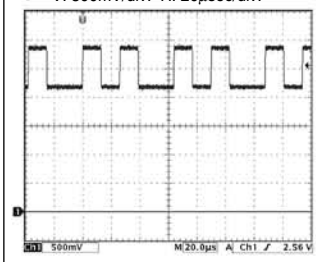
(21) IC4806-pin 2
V: 500mV/div. H: 20µsec/div.



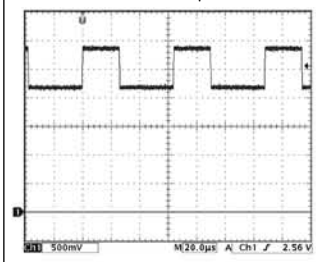
(22) IC4806-pin 4
V: 500mV/div. H: 20µsec/div.



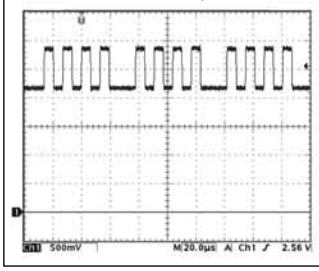
(23) IC4806-pin 6
V: 500mV/div. H: 20µsec/div.



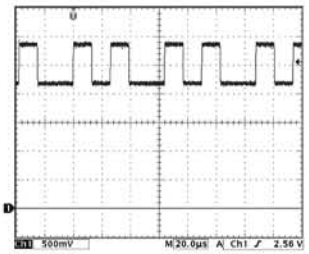
(24) IC4806-pin 8
V: 500mV/div. H: 20µsec/div.



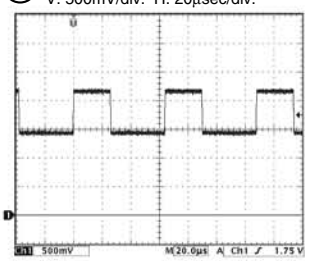
(25) IC4806-pin 10
V: 500mV/div. H: 20µsec/div.



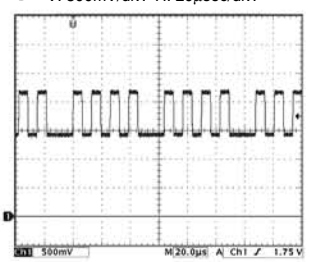
(26) IC4806-pin 12
V: 500mV/div. H: 20µsec/div.



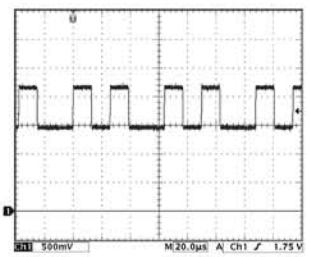
(27) IC4806-pin 30
V: 500mV/div. H: 20µsec/div.



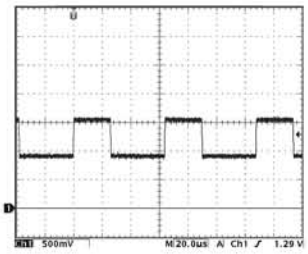
(28) IC4806-pin 32
V: 500mV/div. H: 20µsec/div.



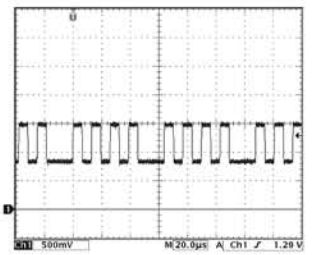
(29) IC4806-pin 34
V: 500mV/div. H: 20µsec/div.



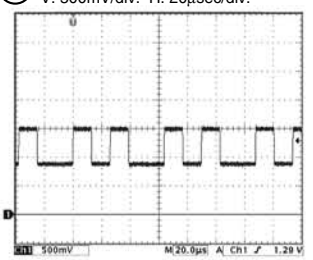
(30) IC6003-pin 160
V: 500mV/div. H: 20µsec/div.



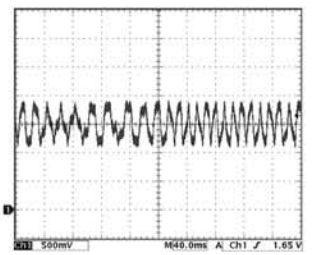
(31) IC6003-pin 164
V: 500mV/div. H: 20µsec/div.



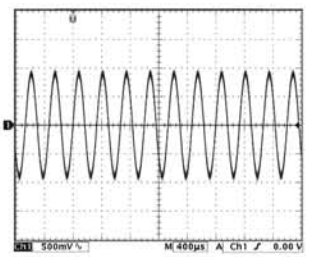
(32) IC6003-pin 172
V: 500mV/div. H: 20µsec/div.



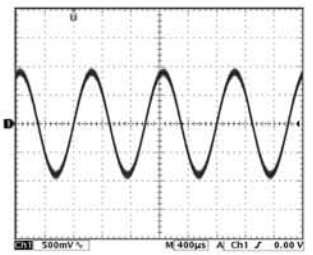
(33) IC6003-pin 164
V: 500mV/div. H: 20µsec/div.



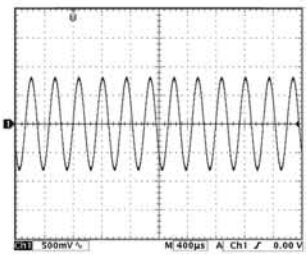
(34) IC6003-pin 172
V: 500mV/div. H: 20µsec/div.



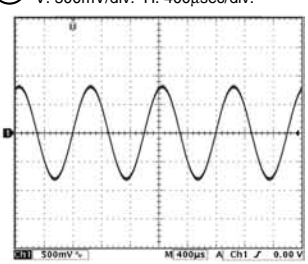
(35) IC4401-pin 31
V: 500mV/div. H: 400µsec/div.



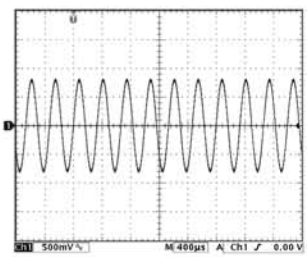
(36) IC4804-pin 19
V: 500mV/div. H: 400µsec/div.



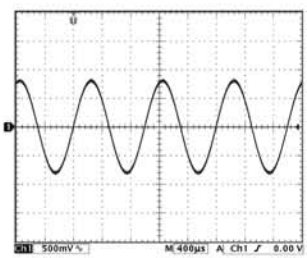
(37) IC4804-pin 20
V: 500mV/div. H: 400µsec/div.



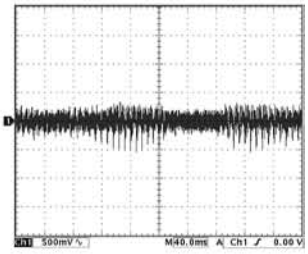
(38) IC4804-pin 13
V: 500mV/div. H: 400µsec/div.



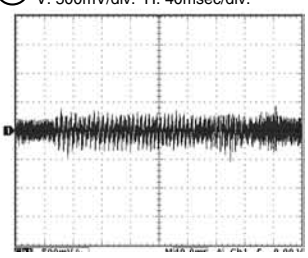
(39) IC4804-pin 14
V: 500mV/div. H: 400µsec/div.



(40) IC6405-pin 7
V: 500mV/div. H: 40msec/div.



(41) IC6405-pin 8
V: 500mV/div. H: 40msec/div.



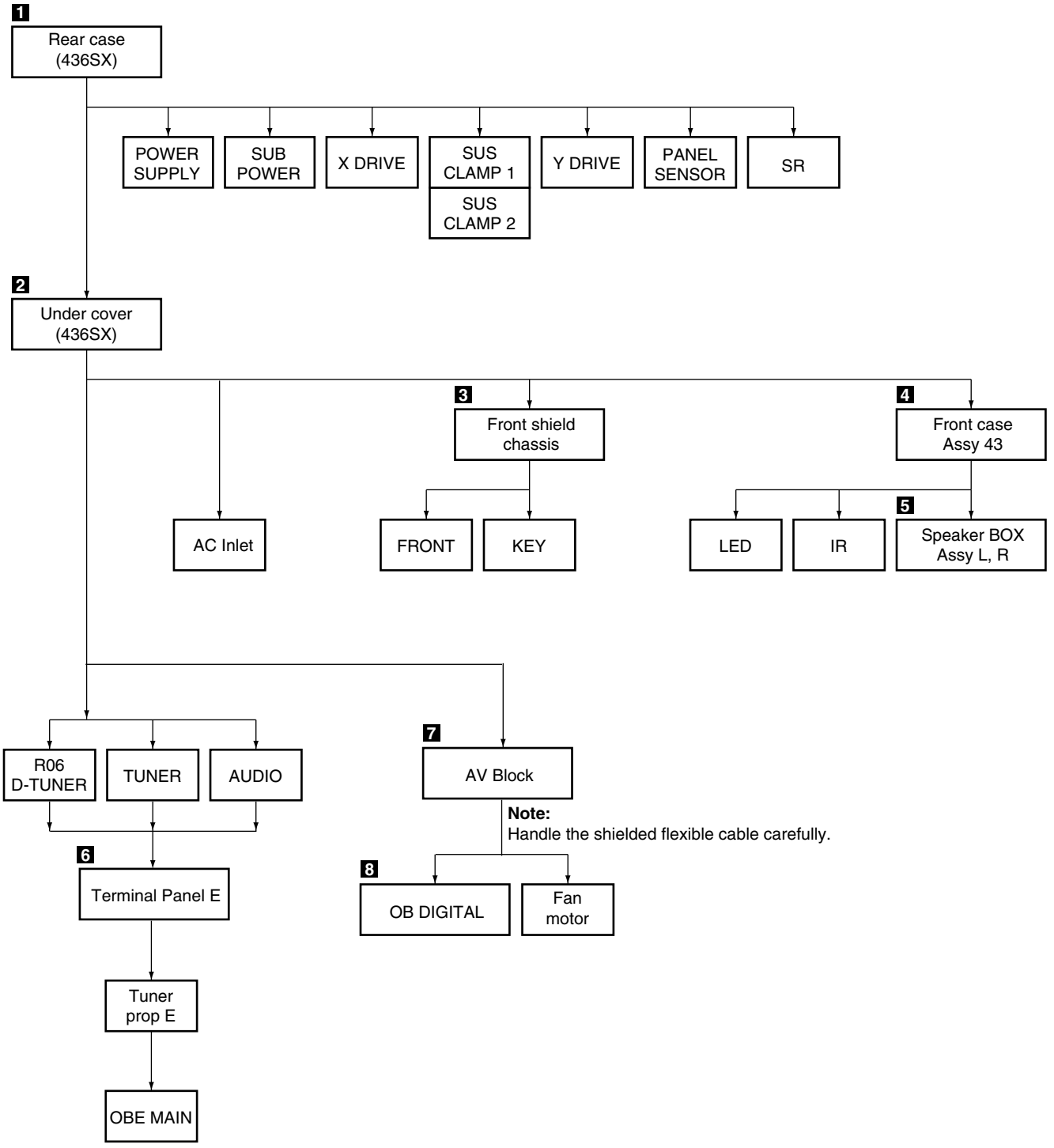
7.1.8 DISASSEMBLY

Note 1: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Note 2: The following flexible cables for servicing are necessary for diagnosis of boards:
- Flexible Extension cable for servicing (40P) (GGD1170)

Chart of removal order for the main parts and boards

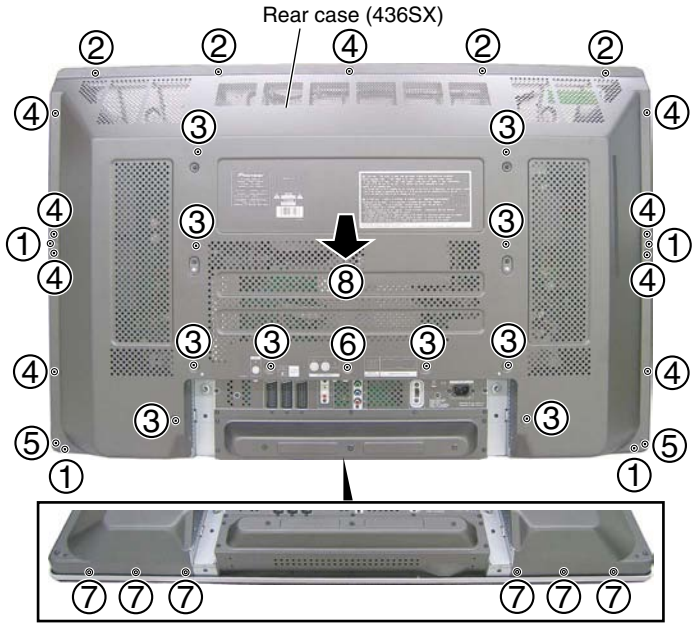
It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:



Disassembly

1 Rear Case (436SX)

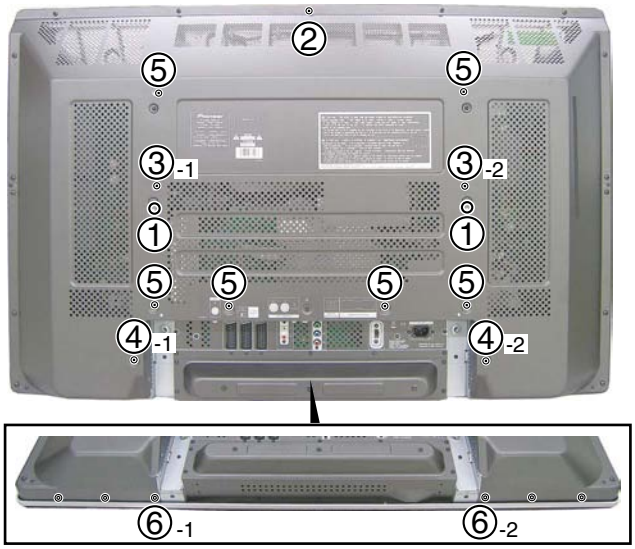
① Remove the four screws. (ABA1332)
② Remove the four screws. (BBZ40P180FTB)
③ Remove the ten screws. (AMZ30P060FTB)
④ Remove the nine screws. (TBZ40P080FTB)
⑤ Remove the two screws and two washers. (TBZ40P080FTB + WC40FTB)
⑥ Remove the one screw. (ABA1341)
⑦ Remove the six hexagon screws. (ABA1345)
⑧ Remove the rear case (436SX).



● About reattachment

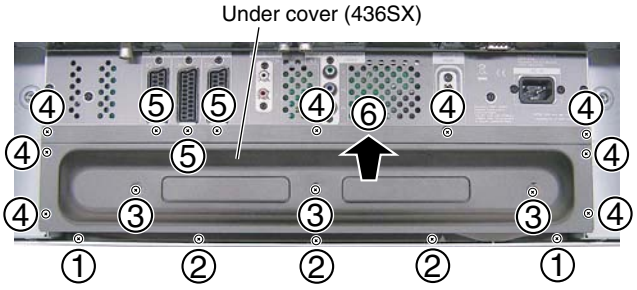
Because of the complex shape of the Rear case, it is difficult to align the screw holes when reattaching the Rear case. For easy reattachment, be sure to install the screws for the Rear case in the order indicated in the photo. After securing those screws in place, the other screws and washers can be reattached in any order.

① Engage the two Positioning Pins.
② One screw (TBZ40P080FTB)
③ Two screws (AMZ30P060FTB)
④ Two screws (AMZ30P060FTB)
⑤ Six screws (AMZ30P060FTB)
⑥ Two hexagon screws (ABA1345)



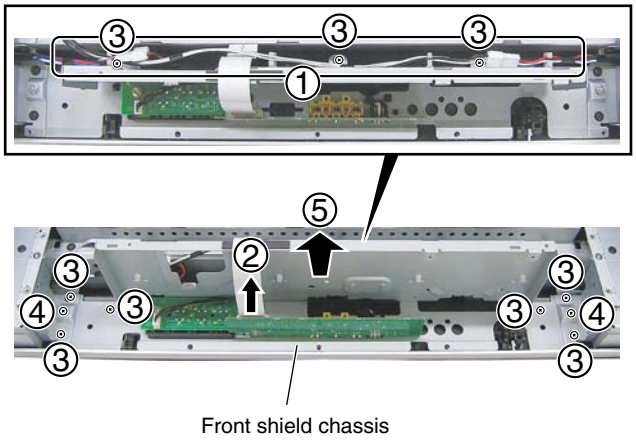
2 Under Cover (436SX)

① Remove the two screws. (ABZ30P080FTB)
② Remove the three screws. (APZ30P100FTB)
③ Remove the three screws. (ABA1340)
④ Remove the eight screws. (AMZ30P060FTB)
⑤ Remove the three screws. (BPZ30P080FTB)
⑥ Remove the under cover (436SX).



3 Front Shield Chassis

① Detach the speaker cables from their cable ties.
② Disconnect the one flexible cable.
③ Remove the nine screws.
④ Remove the two screws.
⑤ Remove the front shield chassis with the PCB boards.



4 Front Case Assy 43

① Pull the lower part of the Front case Assy 43 toward you and out.
② Remove the Front case Assy 43, by pulling it upward.

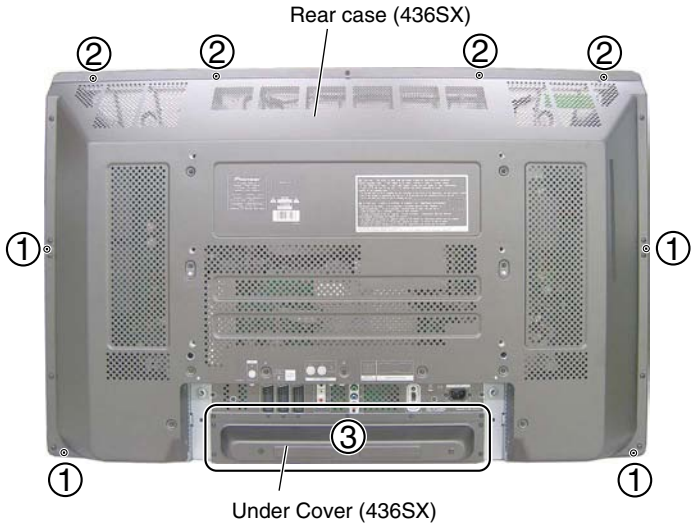
● **Removal of only the Front case Assy 43**

If only the Front case Assy 43 must be removed, follow the procedure below:

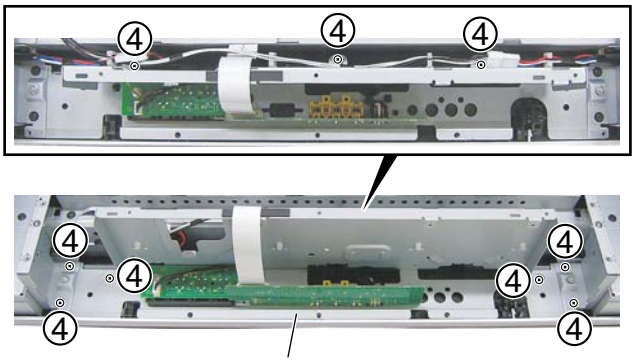
① Remove the four screws. (ABA1332)

② Remove the four screws. (BBZ40P180FTB)

③ Remove the under cover (436SX). (See Procedure 2.)

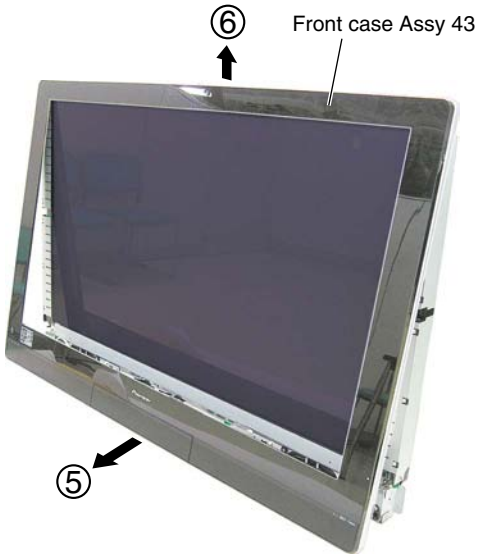


④ Remove the nine screws. (APZ30P100FTB)



⑤ Pull the lower part of the Front case Assy 43 toward you and out.

⑥ Remove the Front case Assy 43, by pulling it upward.

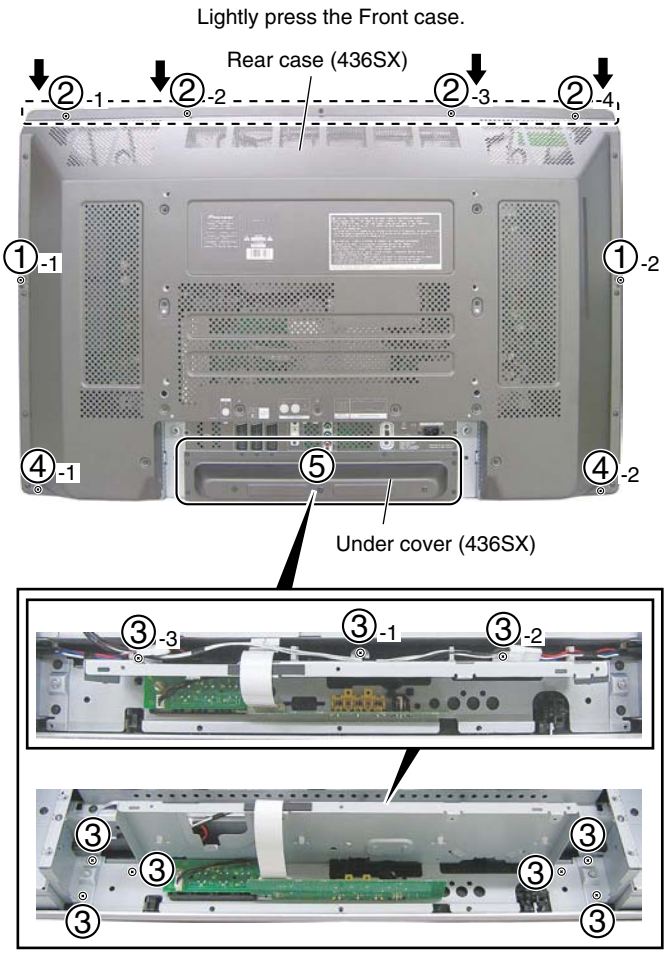


● About reattachment of the Front case Assy 43

When reattaching the Front case Assy with the Rear case attached, be sure to install the screws in the order described below:

① Two screws (ABA1332)
② Four screws (BBZ40P180FTB)
③ Nine screws (APZ30P100FTB)
④ Two screws (ABA1332)
⑤ Under cover (436SX)
(See Procedure 2.)

Note:
While the screws in Steps ① and ② are being installed, the Front case tends to shift upward. In order to not allow any undesired gap between the Rear case and the Front case, while tightening the screws, lightly press and hold the four locations near the screws indicated with arrows in the photo at right.



5 Speaker BOX Assy L and R

● **Speaker BOX Assy R**

① Remove the three screws.

② Remove the one screw.
(As this screw is made of stainless steel, it does not cling to a magnetized screwdriver. Care must be taken not to drop and lose it.)

③ Disconnect the speaker cable.

④ Detach the cable from their cable ties and disconnect the cable.

⑤ Remove the speaker BOX Assy R.

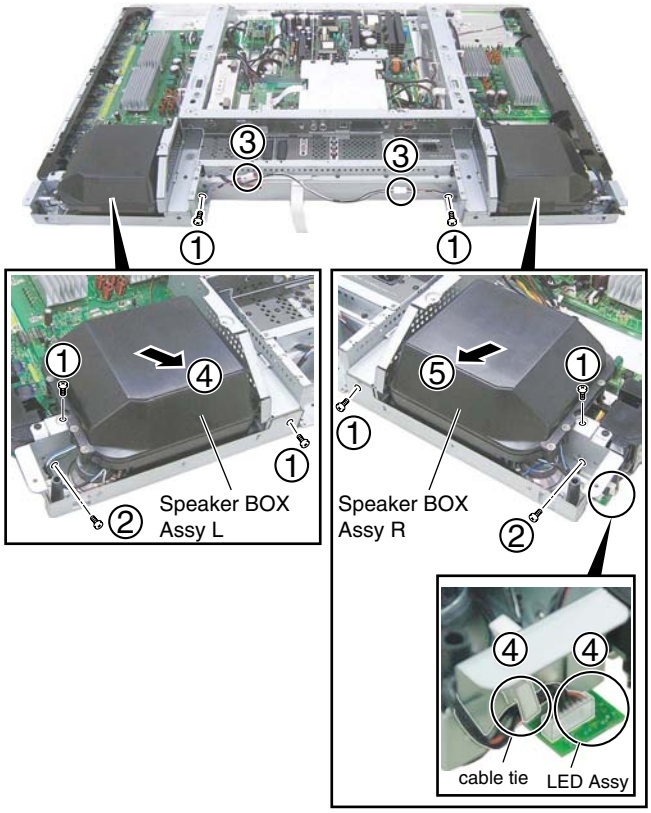
● **Speaker BOX Assy L**

① Remove the three screws.

② Remove the one screw.
(As this screw is made of stainless steel, it does not cling to a magnetized screwdriver. Care must be taken not to drop and lose it.)

③ Disconnect the speaker cable.

④ Remove the speaker BOX Assy L.



6 Terminal Panel E

① Remove the rear cover.

② Remove the 15 screws.

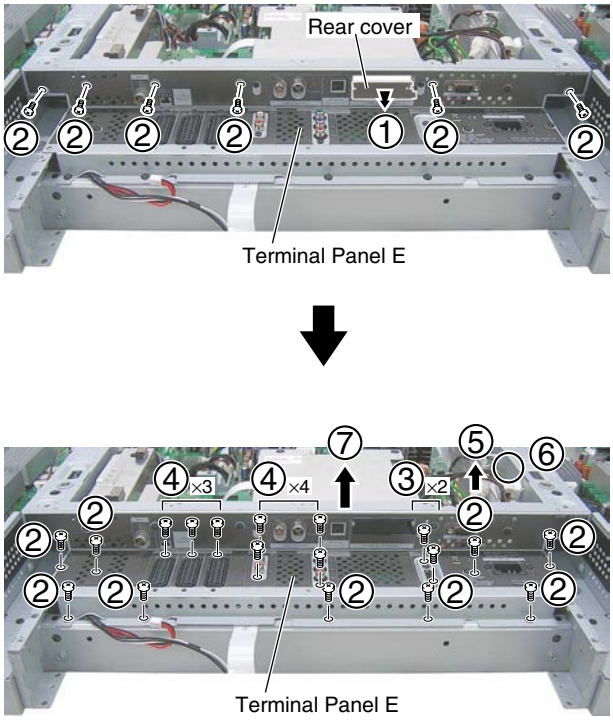
③ Remove the two screws.

④ Remove the seven screws.

⑤ Disconnect the connector. (SR connector)

⑥ Disconect the connector. (AC inlet)

⑦ Remove the terminal panel E.



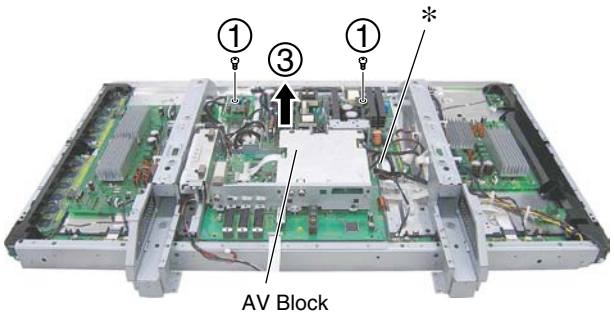
7 AV Block

① Remove the two screws.

② Disconnect cables, as required.

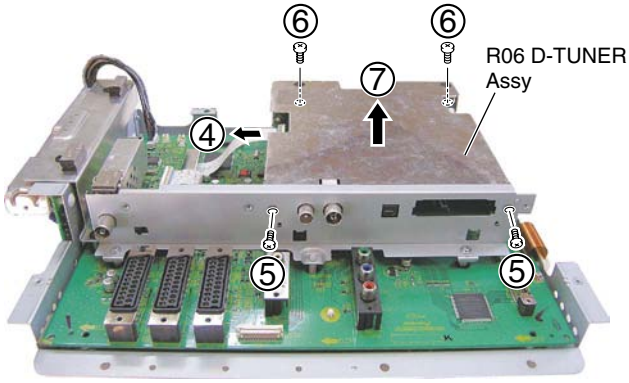
∗ **Note:** Be careful in handling the shielded flexible cable that connects between the OBE MAIN and OB DIGITAL Assys.

③ Remove the AV Block.



④ Disconnect the flexible cable.
⑤ Remove the two screws.
⑥ Remove the two screws.
⑦ Remove the R06 D-TUNER Assy.

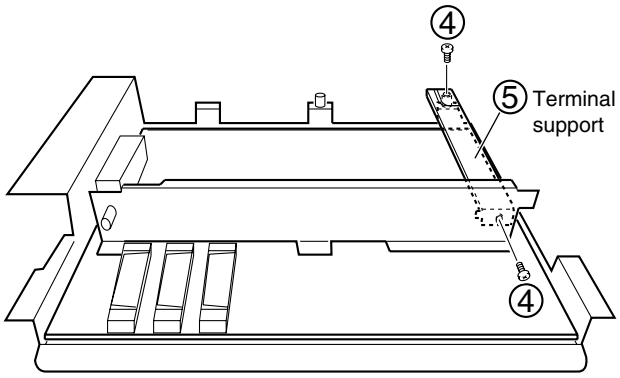
PDP-436SXE only



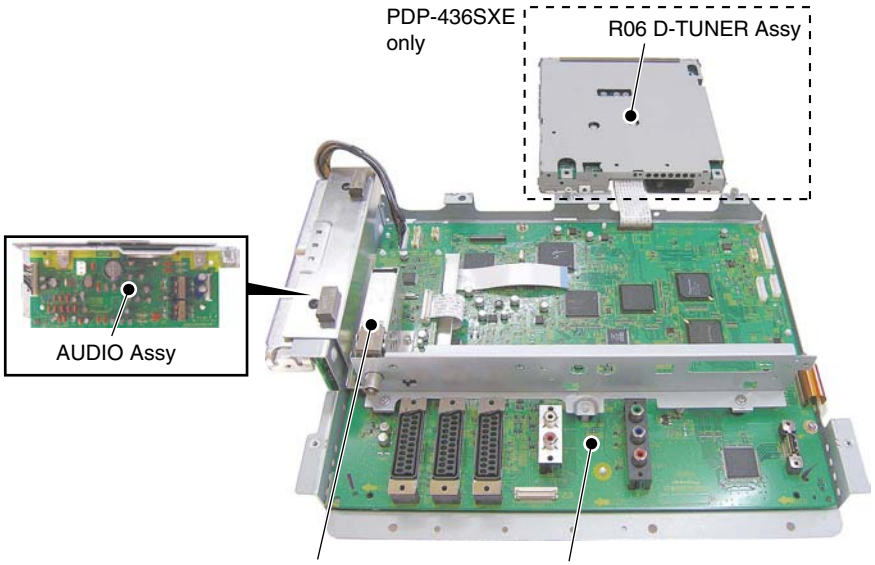
436SXE model

④ Remove the two screws.
⑤ Remove the terminal support.

PDP-436RXE only



436RXE model



PDP-436SXE

8 Diagnosis and replacement of the OB DIGITAL Assy

For diagnosis of the OB DIGITAL Assy, it is not necessary to remove all the parts mentioned above. To perform a diagnosis and replacement, follow the procedures below:

① Remove the rear case (436SX). (See the procedure 1.)

② Remove the under cover (436SX). (See the procedure 2.)

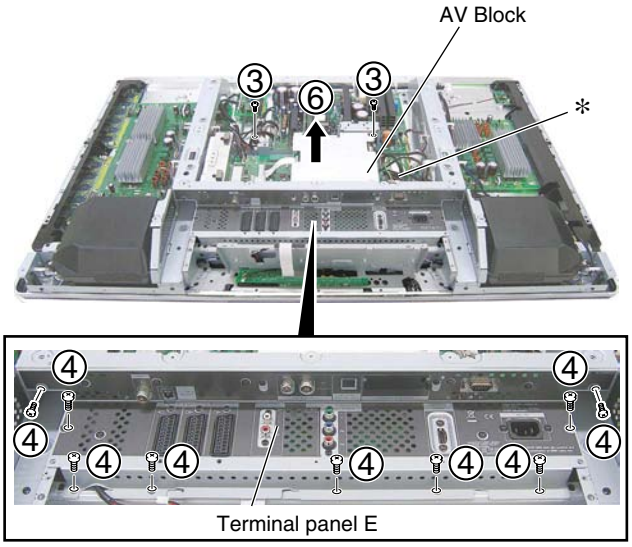
③ Remove the two screws.

④ Remove the nine screws.

⑤ Disconnect cables, as required.

* **Note:** Be careful in handling the shielded flexible cable that connects between the OBE MAIN and OB DIGITAL Assys.

⑥ Remove the AV Block with the terminal panel E.



Diagnosis

⑦ Dress the units, as shown in the photo.

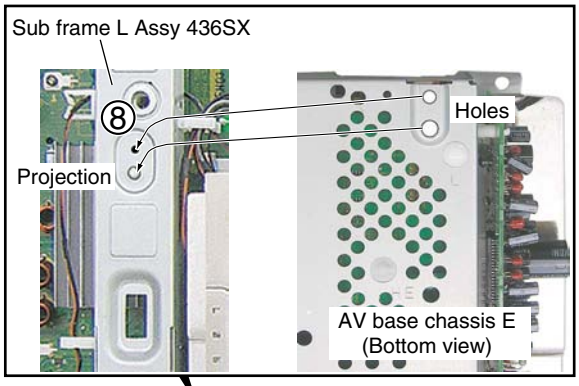
⑧ Install the screw.

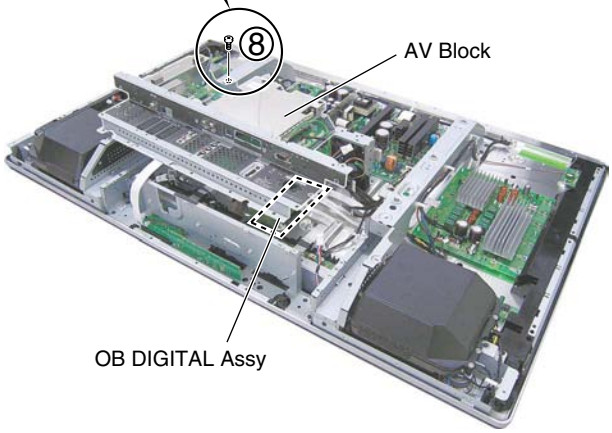
Diagnosis

Replacement

⑦ Disconnect all cables on OB DIGITAL Assy.

⑧ Replace OB DIGITAL Assy..



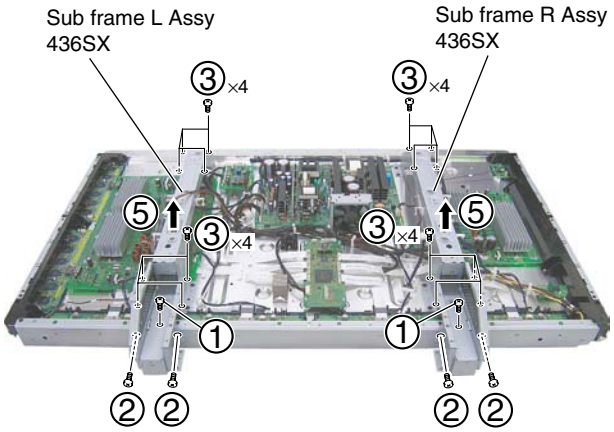


Note:
In this state, it is not possible to check the front inputs. If checking of the front inputs is necessary in this state, remove Terminal panel E then connect the Flexible Extension cable for servicing (GGD1170) between CN4001 on the OBE MAIN Assy and CN7804 on the FRONT Assy.

9 Sub Frame L and R Assy 436SX ~ Front Chassis H Assy 436SX

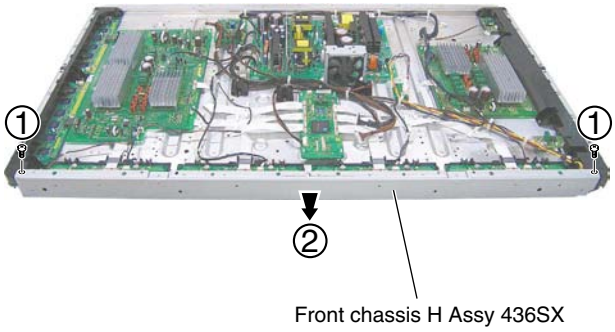
● Sub Frame L and R Assy 436SX

① Remove the one screw each from the sub frame L and R Assys.
② Remove the two screws each from the L and R Assys.
③ Remove the eight screws each from the L and R Assys.
④ Detach the cables from their cable ties, as required.
⑤ Remove the sub frame L and R Assys 436SX.



● Front Chassis H Assy 436SX

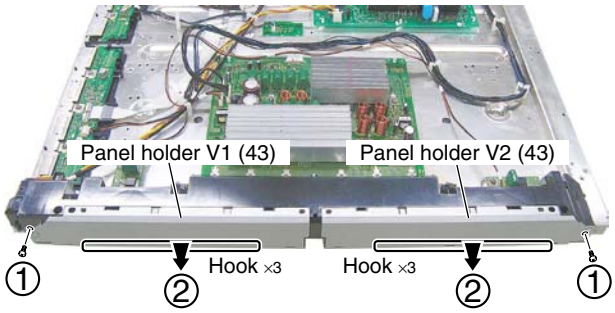
① Remove the two screws.
② Remove the front chassis H Assy 436SX.



10 SUS CLAMP 1 and 2 Assys

① Remove the two screws.

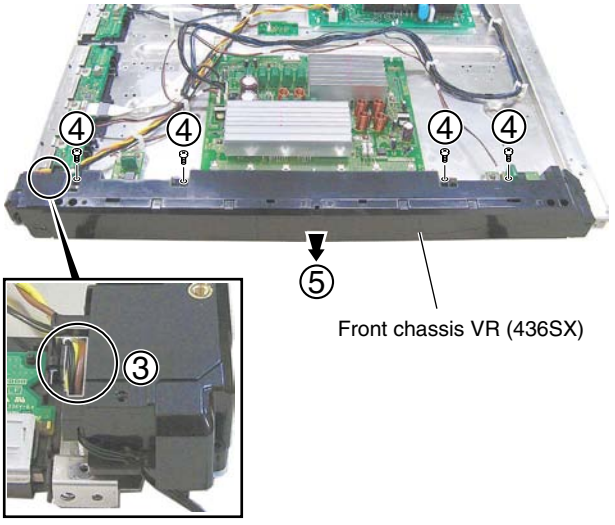
② Remove the panel holder V1 (43) and V2 (43)s. (Unhook the six hooks.)



③ Release the housing wire.

④ Remove the four screws.

⑤ Remove the front chassis VR (436SX).

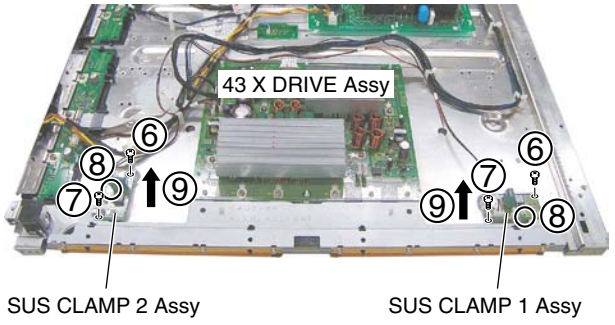


⑥ Remove the two screws.

⑦ Remove the two screws.

⑧ Unhook the two PCB spacers.

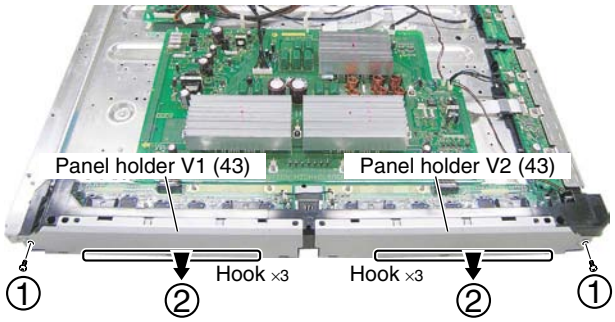
⑨ Remove the SUS CLAMP 1 and 2 Assys.



11 43 SCAN A and B Assys

① Remove the two screws.

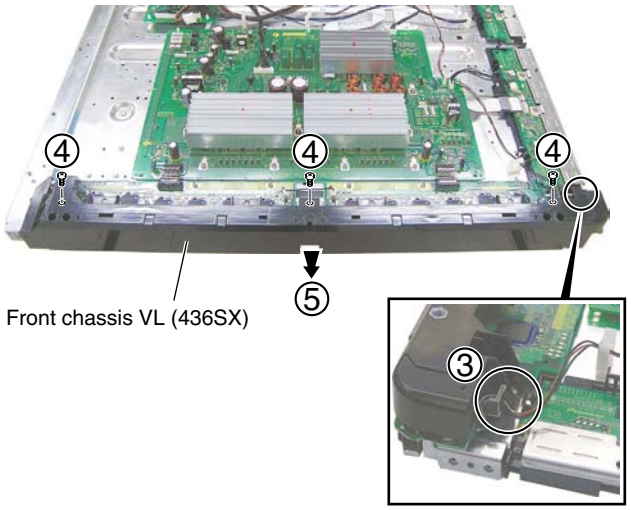
② Remove the panel holder V1 (43) and V2 (43)s. (Unhook the six hooks.)



③ Release the housing wire.

④ Remove the three screws.

⑤ Remove the front chassis VL (436SX).

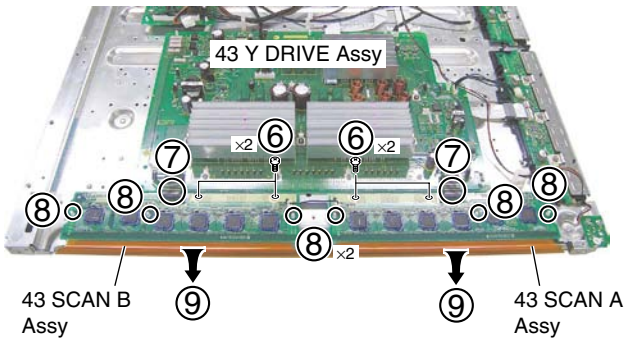


⑥ Remove the four screws.

⑦ Disconnect the two pin connectors.

⑧ Unhook the six PCB spacers.

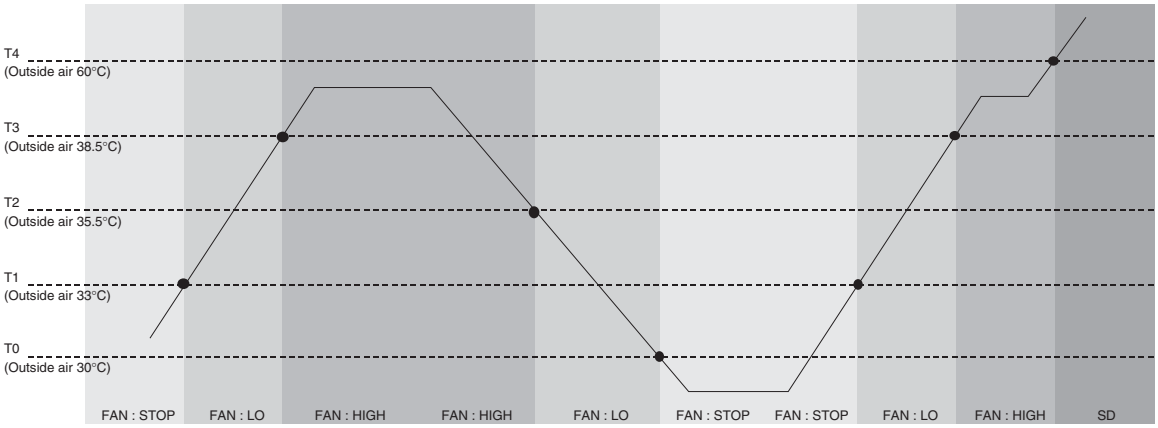
⑨ Remove the 43 SCAN A and B Assys.



7.2 DESCRIPTION
7.2.1 SPECIFICATION ABOUT THE THERMAL PROTECTION

* The change of HI / LO have hysterisis curve below.

Reading value of the season and FAN drive.



Assign			AD value (Thermister) 8 bit	AD value (Thermister) 10 bit	Aime (Sensor position)	Aime (Outside air of Unit)
76pin	TEMP2	T4 setting	105	420	60°C	55°C
		T3 setting	131	524	46°C	38.5°C
		T2 setting	139	556	41°C	38.5°C
		T1 setting	141	564	40°C	33°C
		T0 setting	149	596	35.5°C	30°C

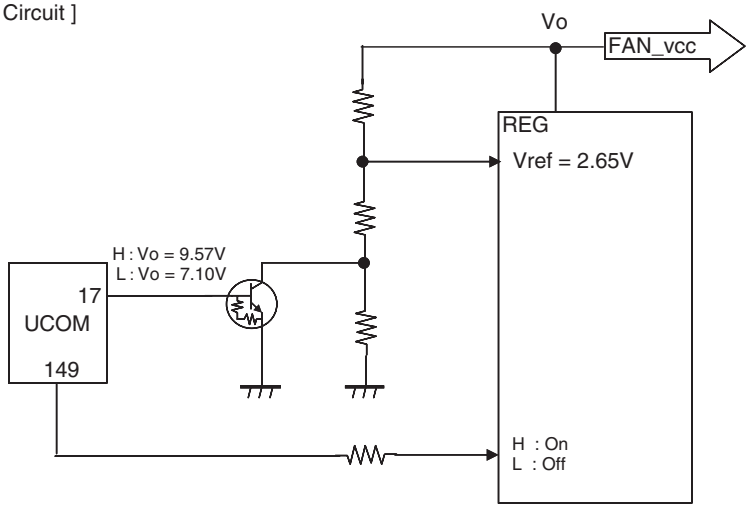
This model controls the FAN drive by MAIN u-com pin 149 (FAN ON / OFF) pin 17 (Cange of FAN control voltage) , not by the traditional PWM.

Assign	FAN : HIGH	FAN : LO	STOP
IC5206 149pin FAN_CONT	H	H	L
IC5206 17pin FAN_CONT_POW	H	L	-

Set State and FAN Drive

POWER	PSW1	State	Control	FAN Operation
ON	ON	ON	According to the reading value of above table sensor.	ON (HIGH/LO/STOP)
ON	ON	DT_REC	According to the reading value of above table sensor.	ON (HIGH/LO/STOP)
OFF		STB	FAN CONT	OFF

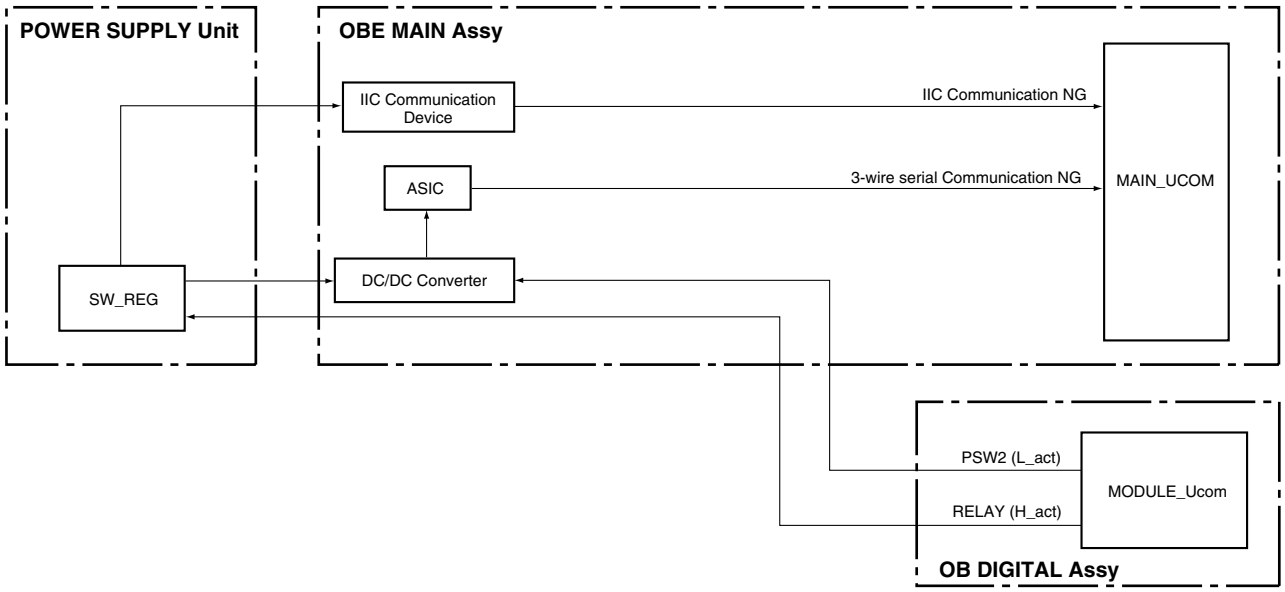
[Outline Circuit]



7.2.2 PROCESSING IN ABNORMALITY

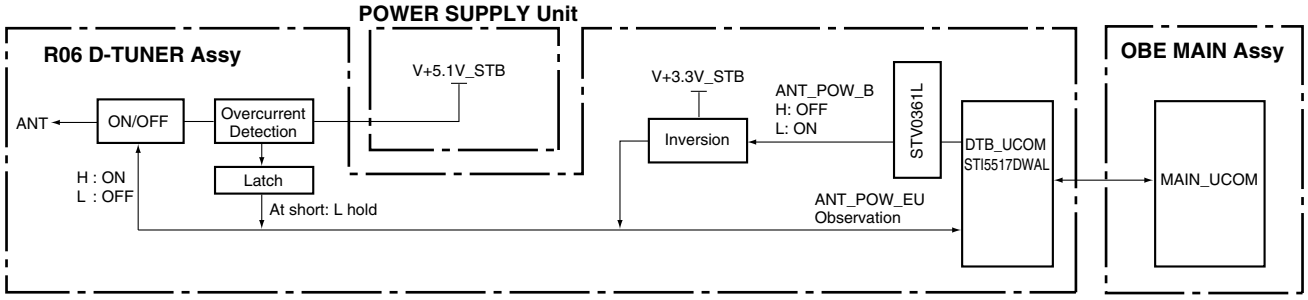
Power supply and DC-DC converter

● **Circuit diagram**



Power supply for DTB Antenna (436SXE Model Only)

● **Circuit diagram**

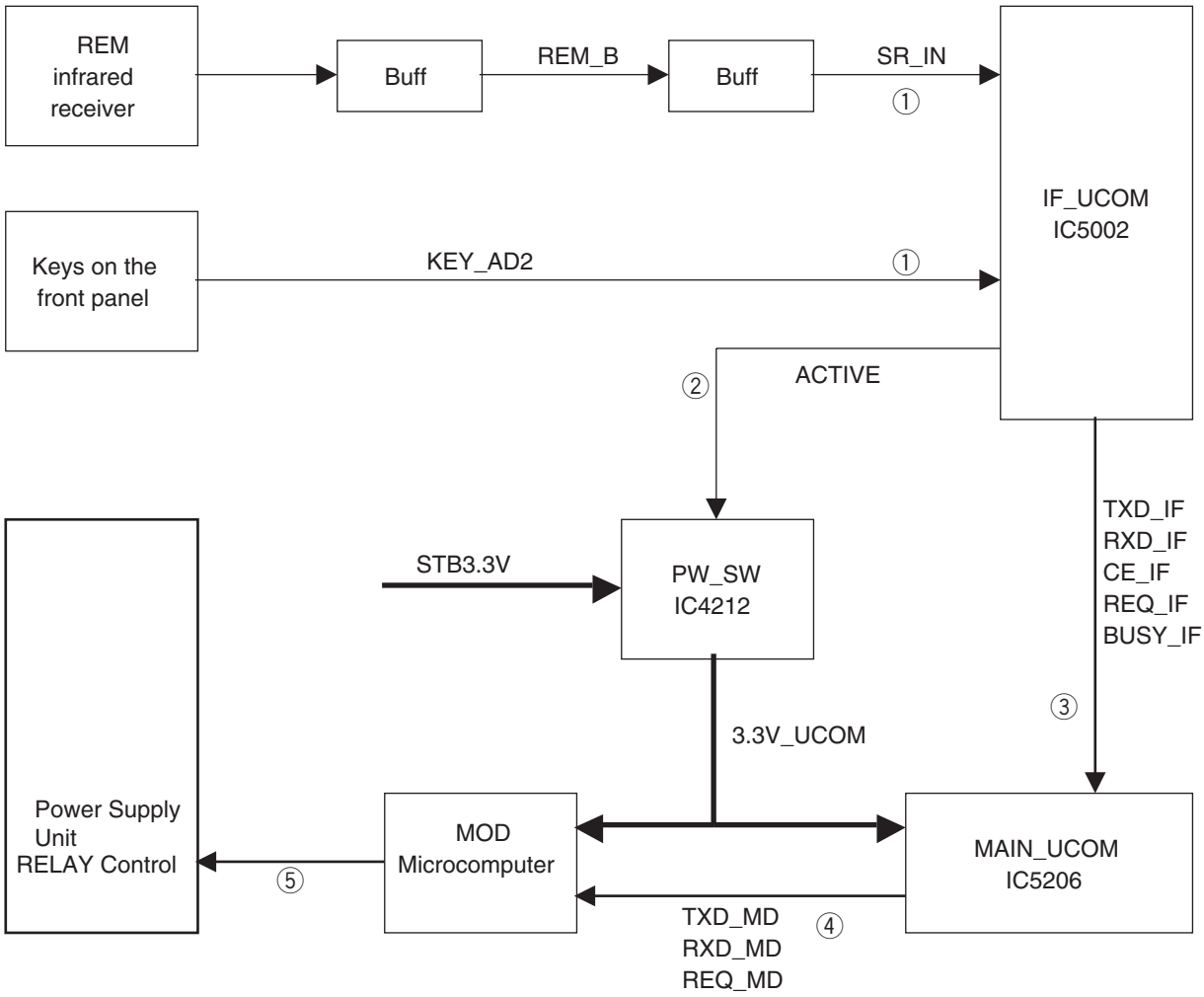


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
ANT_POW_EU	DTB antenna short-circuit	IF_37	Warning with L

7.2.3 POWER ON SEQUENCE

POWER ON SEQUENCE



① : The signal from the remote control unit (or a key signal) is input to the IF microcomputer.
② : The IF microcomputer supplies the power to the main microcomputer and MOD microcomputer.
③ : The IF microcomputer transmits operation data from the remote control unit (or keys) to the main microcomputer.
④ : The main microcomputer issues a startup command to the MOD microcomputer.
⑤ : The MOD microcomputer controls the relay of the PDP Power supply unit and starts the power-on sequence of the PDP.

5 6 7 8

7.3 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● **List of IC**

MB91305PMC-G-BND, M30620FCPGP-U5C, R2S11002AFT, R2S11001FT, UPD64015AGM-UEU AD9985KSTZ-110, SII9021CTU, AXF1149, SN755870PZT, AXF1143, AXF1145, TC74VHC08FTS1, AXF1144, M62334FP, TC74VHC123AFTS1, PST3610UR, PEG122C, NJW1183GK1

■ MB91305PMC-G-BND(OBE MAIN ASSY:IC5206)

• MAIN Microcomputer

● **Pin Function**

No.	Pin Name	Signal Name	I/O	Function	Active
1	VCEE			Vcc (+3.3V)	
2	VSS			GND	
3	VCCI			Vcc (+1.8V)	
4	D24			External Data-bus	
5	D25			External Data-bus	
6	D26			External Data-bus	
7	D27			External Data-bus	
8	D28			External Data-bus	
9	D29			External Data-bus	
10	D30			External Data-bus	
11	D31			External Data-bus	
12	VCEE			Vcc (+3.3V)	
13	VSS			GND	
14	VCCI			Vcc (+1.8V)	
15	RDX			External bus lead strobe	
16	WR0X/DQMUU			External bus lead strobe	
17	WR1X/DQMUL/P30	FAN_CONT_POW	O	Fan output power control (Fan Vcc 7.1/9.5 change)	H
18	CS0X/P31			External bus chip enable	
19	CS1X/P32	CE_IF	O	3 wire serial communication with UIF ucom_Enable old IF_CE	L
20	CS4X/P33	A_MUTE	O	MDR audio output mute	H
21	CS5X/P34	AM_MUTE	O	Audio Monitor output mute	H
22	CS6X/P35		O		
23	CS7X/P36		O		
24	RDY/P37	BUSY_IC3	I	3 wire serial communication with Carrera - Busy Old IC3_BUSY.	H
25	BGRNTX/P40	BUSY_IF	I	3 wire serial communication with UIF ucom-Busy - Old IF_BUSY.	H
26	BRQ/P41	WE_IC3	O	UART path switch for Carrera	L
27	SYSCLK/P42	WATCH_DOG	O	Checking terminal with TP	-
28	MCLKE/P43	PSW1	O	Power SW1 (DC-DC converter output mute)	L
29	MCLK/P44	SD_DET	O	Checking terminal with TP	-
30	ASX/LBAX/SRASX/P45	RST_IF	O	Reset input terminal for IF ucom (Not used)	H
31	BAAX/SCASX/P46	WE_ROM	O	Write protect of EDID-ROM for PC	H
32	WRX/SWRX/P47	CE_IC3	O	3 wire serial communication with Carrera-Enable Old IC3_CE	L
33	VCEE			Vcc (+3.3V)	
34	VSS			GND	
35	VCCI			Vcc (+1.8V)	
36	A00			N.C. setting	
37	A01			Eternal address bus	
38	A02			Eternal address bus	
39	A03			Eternal address bus	
40	A04			Eternal address bus	

No.	Pin Name	Signal Name	I/O	Function	Active
41	A05			Eternal address-bus	
42	A06			Eternal address-bus	
43	A07			Eternal address-bus	
44	A08			Eternal address-bus	
45	A09			Eternal address-bus	
46	A10			Eternal address-bus	
47	A11			Eternal address-bus	
48	A12			Eternal address-bus	
49	A13			Eternal address-bus	
50	A14			Eternal address-bus	
51	A15			Eternal address-bus	
52	VCEE			Vcc (+3.3V)	
53	VSS			GND	
54	VCCI			Vcc (+1.8V)	
55	A16/P50			Eternal address-bus	
56	A17/P51			Eternal address-bus	
57	A18/P52			Eternal address-bus	
58	A19/P53			Eternal address-bus	
59	A20/P54			Eternal address-bus	
60	A21/P55				
61	A22/P56	ELITE_DET	I	SXE/RXE discrimination	
62	A23/P57	APPLI_ON	I	Detection of ASIC testing connection	L
63	VCEE			Vcc (+3.3V)	
64	X0		I	Clock output	
65	VSS			GND	
66	X1		O	Clock output	
67	VCCI			Vcc (+1.8V)	
68	INTX			External reset input	
69	MD0		I	Operation mode setting L_fixed	
70	MD1		I	Operation mode setting H_fixed (No USB)	
71	MD2		I	Operation mode setting normal_L, writing_H	
72	MD3		I	Operation mode setting L_fixed	
73	AVCC			Vcc for A/D	
74	AVRH			Reference Vcc for A/D	
75	AVSS/AVRL			GND for A/D	
76	AN0	TEMP2	I	[A/D] Thermal sensor outside air temperature	AD
77	AN1				AD
78	AN2/PF0	MODE	I	[A/D] Operation mode discrimination	AD
79	AN3/PF1	AFT1	I	[A/D] AFT input 1	AD
80	AN4/PF2				
81	AN5/PF3				
82	AN5/PF4				
83	AN7/PF5				
84	AN8/PF6	CE_IC6	O	3 wire serial communication with Triton-Enable (Not Used)	L
85	AN9/PF7	REQ_MVDEC	I	Change information of various detecting result like frequecy determination	L
86	ICS0			Status output for development tool	
87	ICS1			Status output for development tool	

No.	Pin Name	Signal Name	I/O	Function	Active
88	ICS2			States output for development tool	
89	ICD0			States output for development tool	
90	ICD1			States output for development tool	
91	ICD2			States output for development tool	
92	ICD3			Break for development tool	
93	IBREAK			Clock for development tool	
94	ICLK			Reset for development tool	
95	TRSTX			Reset for development tool	
96	VCEE			Vcc (+3.3V)	
97	VSS			GND	
98	VCCI			Vcc (+1.8V)	
99	SIN0/P60	RXD_WR	I	External PC/FLASH ROM writer / PC card sharing	L
100	SOUT0/P61	TXD_WR	O	External PC/FLASH ROM writer / PC card sharing	L
101	SCK0/P62	CLK_WR	I	Communication with FLASH ROM writer-Clock input	L
102	SIN1/P63	RXD_DT	I	UART communication with degital tuner-data input	L
103	SOUT1/P64	TXD_DT	O	UART communication with degital tuner-data output	L
104	SCK1/P65		I	Not Used	
105	SIN2/P70	RXD_IF	I	3 wire/serial communication with UIF-data input	L
106	SOUT2/P71	TXD_IF	O	3 wire/serial communication with UIF-data output	L
107	SCK2/P72	CLK_IF	O	3 wire/serial communication with UIF-clock output	L
108	SIN3/P73	RXD_MD	I	UART communication with module ucom-data input	L
109	SOUT3/P74	TXD_MD	O	UART communication with module ucom-data output	L
110	SCK3/P75	RST_ASIC	O	Forced reset of ASIC	L
111	SIN4/P80	RXD_IC3	I	3 wire serial communication with Carrera-data input	L
112	SOUT4/P81	TXD_IC3	O	3 wire serial communication with Carrera-data output	L
113	SCK4/P82	CLK_IC3	O	3 wire serial communication with Carrera-clock input	L
114	SCL0/P83	SCL_AV3	O	IIC communication for operating device at function STB-clock output	L
115	SDA0/P84	SDA_AV3	I/O	IIC communication for operating device at function STB-data in/out	L
116	SCL1/P90	SCL_MA	O	IIC communication for operating device at function STB-clock output	L
117	SDA1/P91	SDA_MA	I/O	IIC communication for operating device at function STB-data in/out	L
118	SCL2/P92	SCL_TXT	O	IIC communication for TELE TEXT-clock output	L
119	SDA2/P93	SDA_TXT	I/O	IIC communication for TELE TEXT-data in/out	L
120	SCL3/P94		O		
121	SDA3/P95		O		
122	SCL4/P96	SCL_EP	O	IIC communication for EEPROM-clock output	L
123	SDA4/P97	SDA_EP	I/O	IIC communication for EEPROM-data in/out	L
124	VCEE			Vcc (+3.3V)	
125	VSS			GND	
126	VCCI			Vcc (+1.8V)	
127	NMIX				
128	INT0/PA0	RST2	I	(Interrupt) Detection of ASIC Power RSTIC	L
129	INT1/PA1	RST3	I	(Interrupt) Detection of AC temporary black out	L
130	INT2/PA2	HDMI_INT	I	(Interrupt) Interruption of HDMI Infopacket change (HDMI①)	L
131	INT3/PA3	REQ_IF	I	Communication demand from UIF ucom	H
132	INT4/PA4	REQ_IC3	I	Communication demand from Carrera (sig-mode change)	H
133	INT5/PA5		O	backup (interrupt)	
134	INT6/PA6	REQ_MD	I	Communication demand from module ucom	H

No.	Pin Name	Signal Name	I/O	Function	Active
135	INT7/PA7	RST_TXT		Reset detection of CCD ucom / M2 ucom	L
136	INT8/PB0				
137	INT9/PB1				
138	INT10/ATRG/PB2				
139	INT11/FRCK/PB3				
140	INT12/ICU0/PB4	SCL_AIR	I	IIC comunication for Analog tuner only-clock output	L
141	INT13/ICU1/PB5	SDA_AIR	O	IIC comunication for Analog tuner only-data in/out	L
142	INT14/ICU2/PB6	REQ_PEAK_M	I	Communication demand from Carrera (peak detection of Silvia side inside Triton)	H
143	INT15/ICU3/PB7	REQ_PEAK_S	I	Communication demand from Carrera (peak detection of SCarrera side inside Triton)	H
144	VCEE			Vcc (+3.3V)	
145	UDP			USB + terminal (Not Used)	
146	UDM			USB - terminal (Not Used)	
147	VSS			GND	
148	VCCI			Vcc (+1.8V)	
149	PPG0/PC0	FAN_CONT	O	FAN power ON/OFF control	H
150	PPG1/PC1				
151	PPG2/PC2	TXT-WRB	I	BUSY information when rewviting TXT (old TXT_WKP) FLASH	
152	PPG3/PC3				
153	TOUT0/TRG0/PC4	WE_MD	O	UART path switch for module ucom	L
154	TOUT1/TRG1/PC5	DT_FNC	O	Buffer OFF control for/digital tuner relay board at function STB	L
155	TOUT2/PC6	FAN_NG1	I	NG signal / detection from FAN	H
156	RIN/PC7	WE_DT	O	UART path switch for / digital tuner	L
157	DREQ0/PD0				
158	DACK0/PD1	DT_DET	O	Presence detection of DT	L
159	DEOP0/PD2	RST_DT	I	Output for digital tuner reset	L
160	DREQ1/TIN0/PD3	AIR1_H	I	Reload timer input (terrestrial H frequency count1)	L
161	DACK1/TIN1/PD4				
162	DEOP1/TIN2/PD5	PD5	I	Detection of writing sequence from FLASH ROM (synchronous ⇔ asynchronous)	H
163	DREQ2/TRG1/PE0	WE_TXT	O	UART path switch for text ucom (CC & TELE TEXT)	H
164	DACK2/TRG2/PE1	DEMP	O	HDMI Audio deemphasis band compeusation	H
165	DEOP2/TRG3/PE2	EEPRST	O	Reset SW for EEPROM power	L
166	VCEE			Vcc (+3.3V)	
167	VSS			GND	
168	VCCI			Vcc (+1.8V)	
169	D16/P20			External data bus	
170	D17/P21			External data bus	
171	D18/P22			External data bus	
172	D19/P23			External data bus	
173	D20/P24			External data bus	
174	D21/P25			External data bus	
175	D22/P26			External data bus	
176	D23/P27			External data bus	

M30620FCPGP-U5C(OB DIGITAL ASSY:IC3151)

• MODULE Microcomputer

● Pin Function

No.	Pin Name	Signal Name	I/O	Function	Active
1	P94//DA1/TB4IN	V_SYNC	I	V synchronous detection	L
2	P93/DA0/TB3IN		O		
3	P92/TB2IN/SOUT3	TXD_SQ	O	3 serial communication with AsiRA-data send	
4	P91/TB1IN/SIN3	RXD_SQ	I	3 serial communication with AsiRA-data receive	
5	P90/TB0IN/CLK3	CLK_SQ	O	3 serial communication with AsiRA-clock output	
6	BYTE	BYTE	I	(Connected to GND)	
7	CNVSS	CNVSS	I	Terminal for processor mode setting (pull-down)	
8	P87/XCIN				
9	P86/XCOUT				
10	*RESET	RST_MD	I	Reset input	L
11	XOUT	XOUT	O	Output for main clock	-
12	VSS	VSS	-	GND	-
13	XIN	XIN	I	Input for main clock	-
14	VCC1	VCC1	-	Vcc-STB 3.3V	-
15	P85/*NMI	NMI	I	(Pull-up)	
16	P84/*INT2				
17	P83/*INT1				
18	P82/*INT0	RST2	I	[Interrupt] Astra reset detection	L
19	P81/TA4IN/*U				L
20	P80/TA4OUT/U				H
21	P77/TA3IN				
22	P76/TA3OUT				
23	P75/TA2IN/*W	STOP_SQ		Wathcdog of ASTRA (Not Used)	
24	P74/TA2OUT/W				
25	P73/*CTS2/*RTS2/TA1IN/*V				
26	P72/CLK2/TA1OUT/V	EEPRST	O	Power SW for EEPROM	H
27	P71/RXD2/SCL2/TA0IN/TB5IN	E_SCL	O	IIC clock output for EEPROM	
28	P70/TXD2/SDA2/TA0OUT	E_SDA	I/O	IIC data in/out for EEPROM	
29	P67/TXD1/SDA1	TXD	O	Communication with FLASH ROM writer-data send	
30	P66/RXD1/SCL1	RXD	I	Communication with FLASH ROM writer-data receive	
31	P65/CLK1	SCLK	I	Communication with FLASH ROM writer-clock input	
32	P64/*CTS1/*RTS1/CLKS1	BUSY	O	Communication with FLASH ROM writer-busy output	?
33	P63/TXD0/SDA0	TXD_MAIN	O	UART communication with main ucom (external PC) -data send	
34	P62/RXD0/SCL0	RXD_MAIN	I	UART communication with main ucom (external PC) -data receive	
35	P61/CLK0				
36	P60/*CTS0/*RTS0	REQ_MD	O	Communication demand to main ucom	H
37	P57/*RDY/CLKOUT		O		
38	P56/ALE		O		
39	P55/*HOLD	EPM	I	Terminal for FLASH re-writing mode setting	
40	P54/*HLDA	DRF_B	O	Large-power line OFF	L

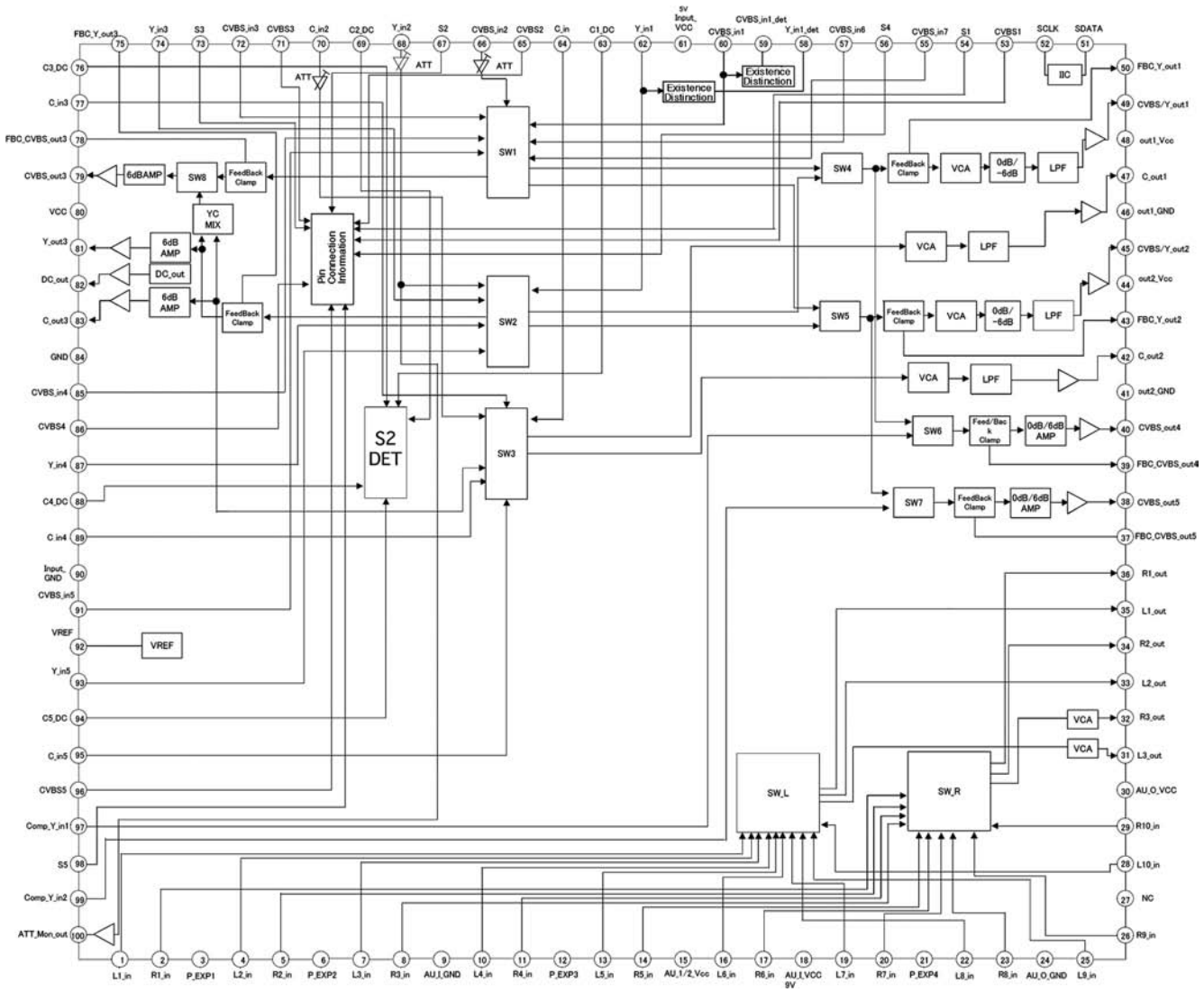
No.	Pin Name	Signal Name	I/O	Function	Active
41	P53/BCLK	RELAY	O	Power ON control output	H
42	P52/*RD		O		
43	P51/*WRH/*BHE		O	Terminal for FLASH re-writing mode setting	
44	P50/*WRL/*WR	CE	I		
45	P47/*CS3	PSIZE	I	Panel size discrimination	H:43
46	P46/*CS2	SCL	O	IIC clock output	H
47	P45/*CS1	SDA	I/O	IIC data in/out	H
48	P44/*CS0	PD_MUTE_B	O	Muting the power-down output to power Assy	L
49	P43/A19				
50	P42/A18				
51	P41/A17	H_DET_B	I	H existence discrimination	L
52	P40/A16		O		
53	P37/A15	RST_SQ	O	Forced reset of ASTRA (100ms after releasing RST2)	L
54	P36/A14	CE_SQ	O	Enable for ASTRA communication	L
55	P35/A13	BUSY_SQ	I	BUSY input for ASTRA communication	H
56	P34/A12	FUT1_SQ	O	Communication reseive to ASTRA	
57	P33/A11	FUT2_SQ	O	Communication reseive to ASTRA	
58	P32/A10		O		
59	P31/A9	WE_SQ	O	Communication path selection control when rewriting ASTRA	H
60	VCC2	VCC2	-	Vcc-STB 3.3V	-
61	P30/A8(/-/D7)	PD_TRG	I	PD detection	L
62	VSS	VSS	-	GND	-
63	P27/AN27/A7(/D7/D6)	SCAN_PD	I	PD for SCAN reduced voltage	H
64	P26/AN26/A6(/D6/D5)	YDRV_PD	I	Y drive PD signal	H
65	P25/AN25/A5(/D5/D4)	YSUS_PD	I	Y-SUSPD signal	H
66	P24/AN24/A4(/D4/D3)	YDCDC_PD	I	Y drive DCDC converter PD signal	H
67	P23/AN23/A3(/D3/D2)	SCN5V_PD	I	PD for SCAN 5V reduced voltage	H
68	P22/AN22/A2(/D2/D1)	XSUS_PD	I	X drive PD signal	H
69	P21/AN21/A1(/D1/D0)	XDCDC_PD	I	X drive DCDC converter PD signal	H
70	P20/AN20/A0/(/D0/-)	XDRV_PD	I	X drive PD signal	H
71	P17/D15/*INT5		O		
72	P16/D14/*INT4		I		
73	P15/D13/*INT3		I		
74	P14/D12				
75	P13/D11	A_MUTE	O	Audio mute	H
76	P12/D10	A_NG	I	Audio NG detection	L
77	P11/D9	PSW2	O	Various power output mute at function STB	H
78	P10/D8	STB_SW	O	Stand-by setting of Audio AMP	L
79	P07/AN17/D7	ADRS_PD	I	Adress PD	H
80	P06/AN16/D6				
81	P05/AN15/D5				
82	P04/AN14/D4				
83	P03/AN13/D3				
84	P02/AN12/D2	DDC_PD	I	DC-DC converter PD signal	H
85	P01/AN11/D1	PS_PD	I	PD signal inside Power Assy	H

No.	Pin Name	Signal Name	I/O	Function	Active
86	P00/AN10/D0	SQ_PD	I	PD for ASTRA drive halt	H
87	P107/AN07/*KI3		O		
88	P106/AN06/*KI2				
89	P105/AN05/*KI1		O		
90	P104/AN04/*KI0				
91	P103/AN03		O		
92	P102/AN02	TEMP1	I	[A/D] AD/input for thermal sensor	
93	P101/AN01	MODE	I	[A/D] Terminal for seeting operation mode	
94	AVSS	AVSS	-	GND for A/D input	-
95	P100/AN00				
96	VREF	VREF	-	Relererce voltage for A/D input	-
97	AVCC	AVCC	-	Vcc for A/D input-STB 3.3V	-
98	P97/*ADTRG/SIN4		O		
99	P96/ANEX1/SOUT4		O		
100	P95/ANEX0/CLK4		O		

■ R2S11002AFT (OBE MAIN ASSY: IC4804)

• AV SW

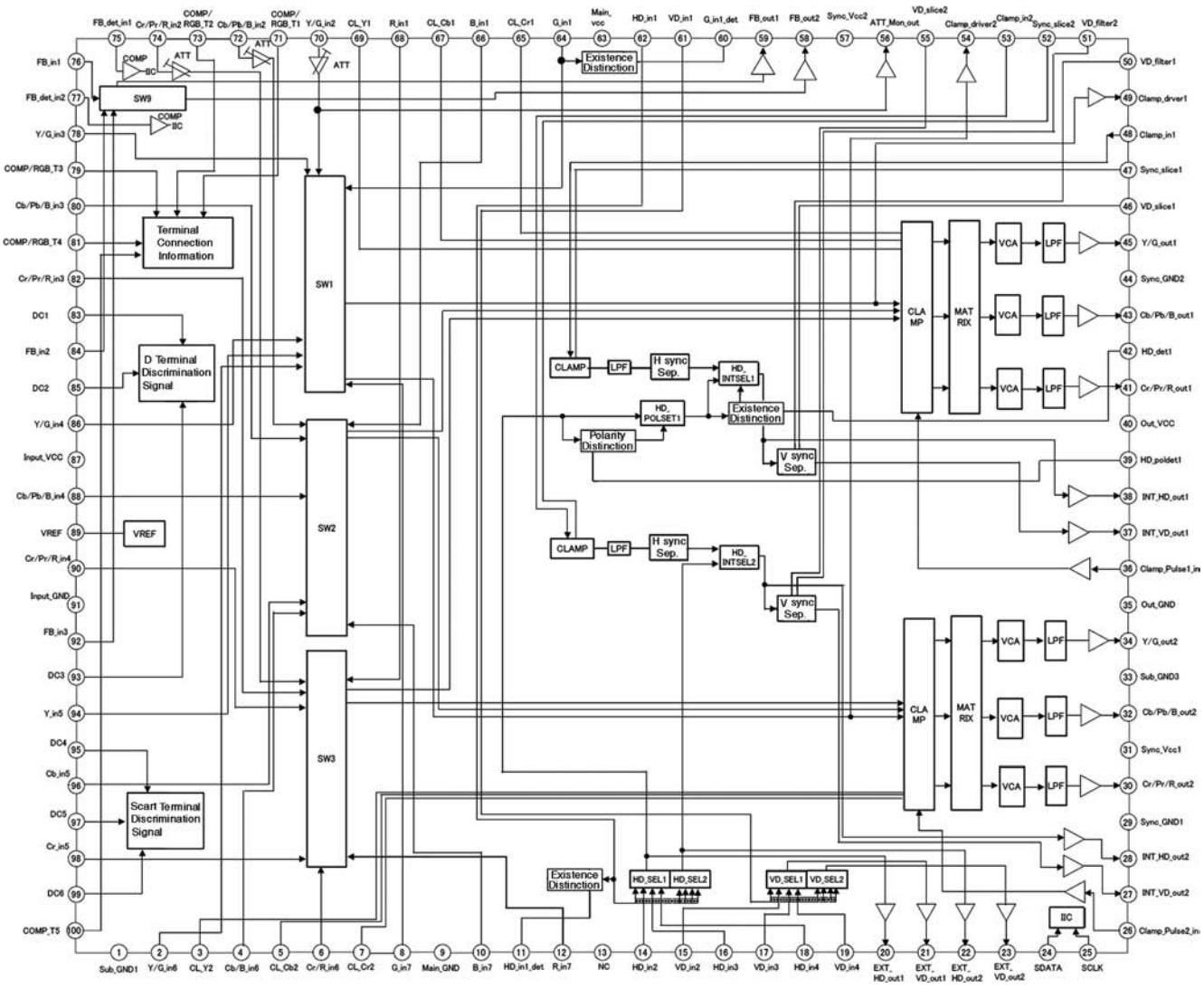
● Block Diagram



■ R2S11001FT (OBE MAIN ASSY: IC4806)

• Component SW IC

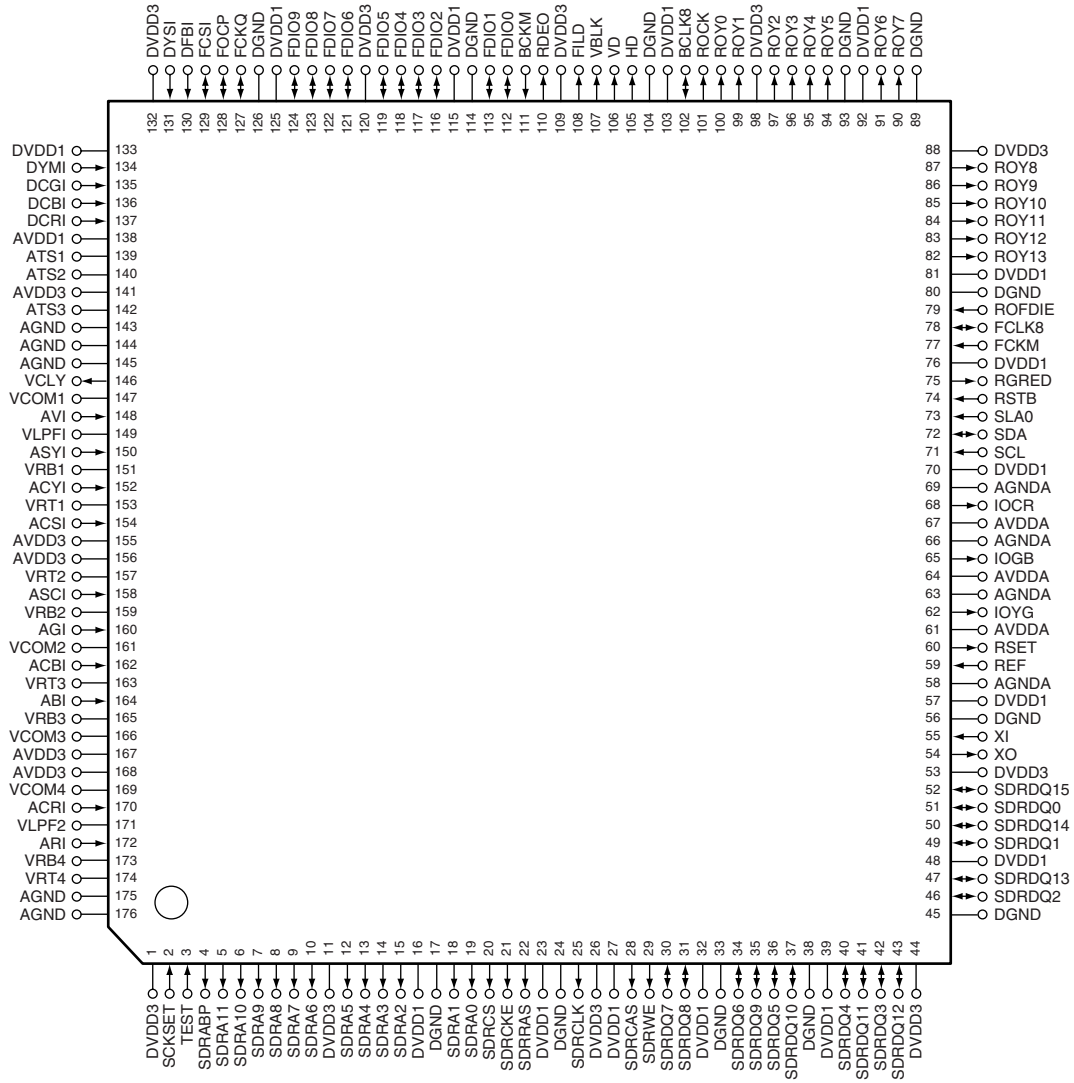
● Block Diagram



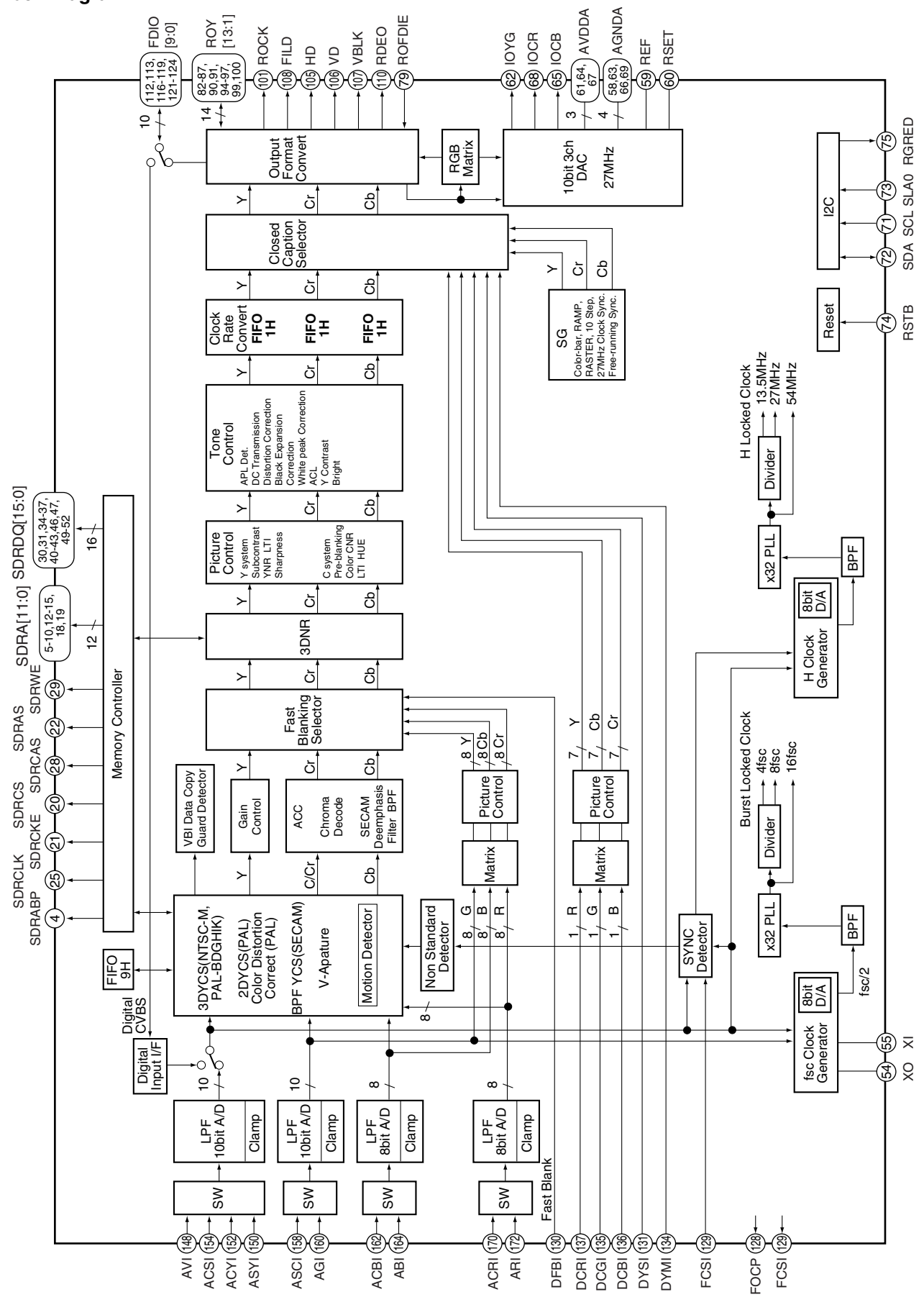
■ UPD64015AGM-UEU (OBE MAIN ASSY : IC6003)

• Video Decoder (for main screen)

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	DVDD3	–	Digital power supply (3.3V)
2	SCKSET	I	Test mode selection (L: Normal, H: Test mode)
3	TEST	I	Test setting (L: Normal, H: Test mode)
4	SDRABP	O	All bank precharge output for external memory (Active High)
5	SDRA11	O	Address output for external memory
6	SDRA10	O	Address output for external memory
7	SDRA9	O	Address output for external memory
8	SDRA8	O	Address output for external memory
9	SDRA7	O	Address output for external memory
10	SDRA6	O	Address output for external memory
11	DVDD3	–	Digital power supply (3.3V)
12	SDRA5	O	Address output for external memory
13	SDRA4	O	Address output for external memory
14	SDRA3	O	Address output for external memory
15	SDRA2	O	Address output for external memory
16	DVDD1	–	Digital power supply (1.5V)
17	DGND	–	Digital ground
18	SDRA1	O	Address output for external memory
19	SDRA0	O	Address output for external memory
20	SDRCS	O	Chip select output for external memory (Active Low)
21	SDRCKE	O	Clock enable output for external memory (Active High)
22	SDRRAS	O	Row address strobe output for external memory (Active Low)
23	DVDD1	–	Digital power supply (1.5V)
24	DGND	–	Digital ground
25	SDRCLK	O	Clock output for external memory
26	DVDD3	–	Digital power supply (3.3V)
27	DVDD1	–	Digital power supply (1.5V)
28	SDRCAS	O	Column address strobe output for external memory (Active Low)
29	SDRWE	O	Write enable output for external memory (Active Low)
30	SDRDQ7	I/O	Data input/output for external memory
31	SDRDQ8	I/O	Data input/output for external memory
32	DVDD1	–	Digital power supply (1.5V)
33	DGND	–	Digital ground
34	SDRDQ6	I/O	Data input/output for external memory
35	SDRDQ9	I/O	Data input/output for external memory
36	SDRDQ5	I/O	Data input/output for external memory
37	SDRDQ10	I/O	Data input/output for external memory
38	DGND	–	Digital ground
39	DVDD1	–	Digital power supply (1.5V)
40	SDRDQ4	I/O	Data input/output for external memory
41	SDRDQ11	I/O	Data input/output for external memory
42	SDRDQ3	I/O	Data input/output for external memory
43	SDRDQ12	I/O	Data input/output for external memory
44	DVDD3	–	Digital power supply (3.3V)
45	DGND	–	Digital ground
46	SDRDQ2	I/O	Data input/output for external memory
47	SDRDQ13	I/O	Data input/output for external memory
48	DVDD1	–	Digital power supply (1.5V)
49	SDRDQ1	I/O	Data input/output for external memory
50	SDRDQ14	I/O	Data input/output for external memory

No.	Pin Name	I/O	Pin Function
51	SDRDQ0	I/O	Data input/output for external memory
52	SDRDQ15	I/O	Data input/output for external memory
53	DVDD3	–	Digital power supply (3.3V)
54	XO	O	Reference clock output Connect a 24.576MHz crystal.
55	XI	I	Reference clock input Connect a 24.576MHz crystal.
56	DGND	–	Digital ground
57	DVDD1	–	Digital power supply (1.5V)
58	AGNDA	–	Analog ground for DAC
59	REF	I	External reference input
60	RSET	O	Connect a 620 ohm resistor for external adjustment to AGND
61	AVDDA	–	Analog power supply for DAC (3.3V)
62	IOYG	O	Color-difference component Y / RGB component G output signal
63	AGNDA	–	Analog ground for DAC
64	AVDDA	–	Analog power supply for DAC (3.3V)
65	IOGB	O	Color-difference component Cb / RGB component B output signal
66	AGNDA	–	Analog ground for DAC
67	AVDDA	–	Analog power supply for DAC (3.3V)
68	IOCR	O	Color-difference component Cr / RGB component R output signal
69	AGNDA	–	Analog ground for DAC
70	DVDD1	–	Digital power supply (1.5V)
71	SCL	I	I^2C bus clock input Connect to SCL line of the system.
72	SDA	I/O	I^2C bus data input/output Connect to SDA line of the system.
73	SLA0	I	I^2C bus slave address select input (L: B8h/B9h, H: BAh/BBh)
74	RSTB	I	System reset input (Active Low)
75	RGRED	O	I^2C register read flag output (Active Low)
76	DVDD1	–	Digital power supply (1.5V)
77	FCKM	I	FCLK8 test mode selection (L: Normal, H: Test mode)
78	FCLK8	I/O	Line-lock clock monitor input/output
79	ROFDIE	I	Output enable of the video input/output terminal L: Output terminal Hi-Z, H: Output enable
80	DGND	–	Digital ground
81	DVDD1	–	Digital power supply (1.5V)
82	ROY13	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
83	ROY12	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
84	ROY11	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
85	ROY10	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
86	ROY9	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
87	ROY8	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
88	DVDD3	–	Digital power supply (3.3V)
89	DGND	–	Digital ground
90	ROY7	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
91	ROY6	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
92	DVDD1	–	Digital power supply (1.5V)
93	DGND	–	Digital ground
94	ROY5	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
95	ROY4	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
96	ROY3	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
97	ROY2	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
98	DVDD3	–	Digital power supply (3.3V)
99	ROY1	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
100	ROY0	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output

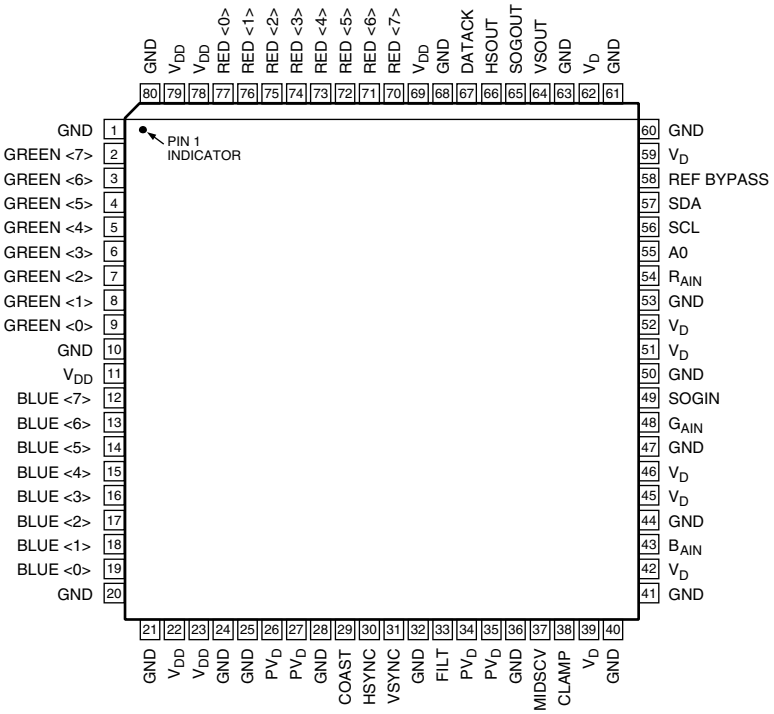
No.	Pin Name	I/O	Pin Function
101	ROCK	O	Clock for digital ITU-R BT. 656/component output
102	BCLK8	I/O	Line-lock clock monitor input/output
103	DVDD1	–	Digital power supply (1.5V)
104	DGND	–	Digital ground
105	HD	O	Horizontal sync. signal output
106	VD	O	Vertical sync. signal output
107	VBLK	O	V blanking output
108	FILD	O	Field output
109	DVDD3	–	Digital power supply (3.3V)
110	RDEO	O	Effective pixel area output
111	BCKM	I	Test mode selection of BCLK8 pin (L: Normal, H: Test mode)
112	FDIO0	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
113	FDIO1	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
114	DGND	–	Digital ground
115	DVDD1	–	Digital power supply (1.5V)
116	FDIO2	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
117	FDIO3	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
118	FDIO4	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
119	FDIO5	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
120	DVDD3	–	Digital power supply (3.3V)
121	FDIO6	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
122	FDIO7	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
123	FDIO8	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
124	FDIO9	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
125	DVDD1	–	Digital power supply (1.5V)
126	DGND	–	Digital ground
127	FCKQ	I/O	Sampling clock output for digital connection
128	FOCP	I/O	Clamp pulse output for digital connection / Timing output for digital RGB input (VD)
129	FCSI	I/O	Sync sep. signal input / Timing output for RGB input (HD)
130	DFBI	I	Fast blanking signal input for analog RGB input
131	DYSI	I	YS signal input for digital RGB input
132	DVDD3	–	Digital power supply (3.3V)
133	DVDD1	–	Digital power supply (1.5V)
134	DYMI	I	YM signal input for digital RGB input
135	DCGI	I	Digital RGB/G signal input
136	DCBI	I	Digital RGB/B signal input
137	DCRI	I	Digital RGB/R signal input
138	AVDD1	–	Analog power supply (1.5V)
139	ATS1	–	Analog test input Normally, connect to GND.
140	ATS2	–	Analog test input Normally, connect to GND.
141	AVDD3	–	Analog power supply (3.3V)
142	ATS3	–	Analog test input Normally, connect to GND.
143	AGND	–	Analog ground
144	AGND	–	Analog ground
145	AGND	–	Analog ground
146	VCLY	O	ADC1 clamp voltage
147	VCOM1	–	ADC1 common-mode reference voltage
148	AVI	I	ADC1 composite/Y signal input
149	VLPFI	–	Analog test output Connect to GND via 0.1μF capacitor.
150	ASYI	I	ADC1 composite/Y signal input

No.	Pin Name	I/O	Pin Function
151	VRB1	–	ADC1 bottom reference voltage
152	ACYI	I	ADC1 composite/Y signal input
153	VRT1	–	ADC1 top reference voltage
154	ACSI	I	ADC1 composite/Y signal input
155	AVDD3	–	Analog power supply for ADC (3.3V)
156	AVDD3	–	Analog power supply for ADC (3.3V)
157	VRT2	–	ADC2 top reference voltage
158	ASCI	I	ADC2 separate C signal input
159	VRB2	–	ADC2 bottom reference voltage
160	AGI	I	ADC2 RGB component G signal input
161	VCOM2	–	ADC2 common-mode reference voltage
162	ACBI	I	ADC3 color-difference component Cb signal input
163	VRT3	–	ADC3 top reference voltage
164	ABI	I	ADC3 RGB component B signal input
165	VRB3	–	ADC3 bottom reference voltage
166	VCOM3	–	ADC3 common-mode reference voltage
167	AVDD3	–	Analog power supply for ADC (3.3V)
168	AVDD3	–	Analog power supply for ADC (3.3V)
169	VCOM4	–	ADC4 common-mode reference voltage
170	ACRI	I	ADC4 color-difference component Cr signal input
171	VLPF2	–	Analog test output
172	ARI	I	ADC3 RGB component R signal input
173	VRB4	–	ADC4 bottom reference voltage
174	VRT4	–	ADC4 top reference voltage
175	AGND	–	Analog ground
176	AGND	–	Analog ground

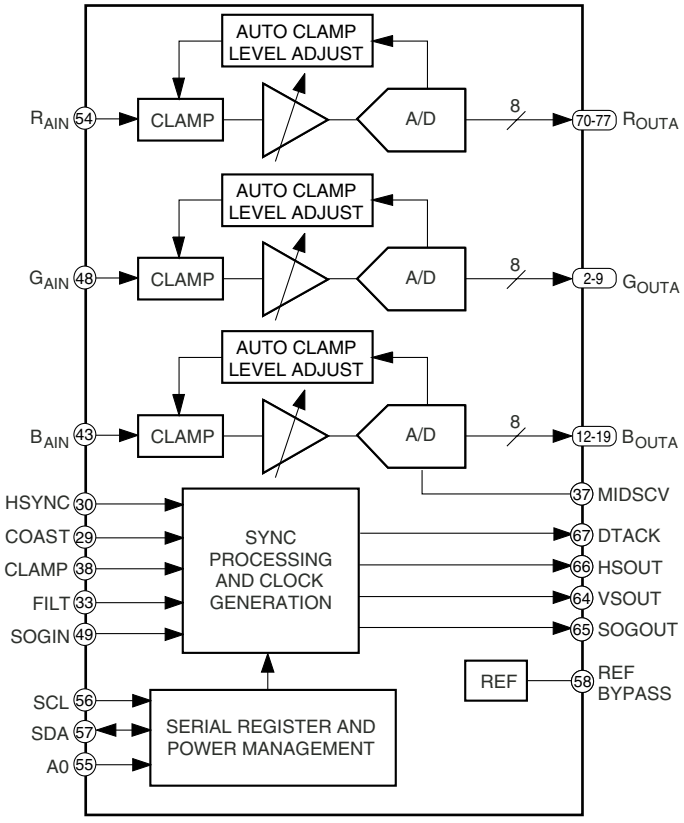
AD9985KSTZ-110 (OBE MAIN ASSY : IC6201)

• ADC

● Pin Arrangement (Top view)



● Block Diagram



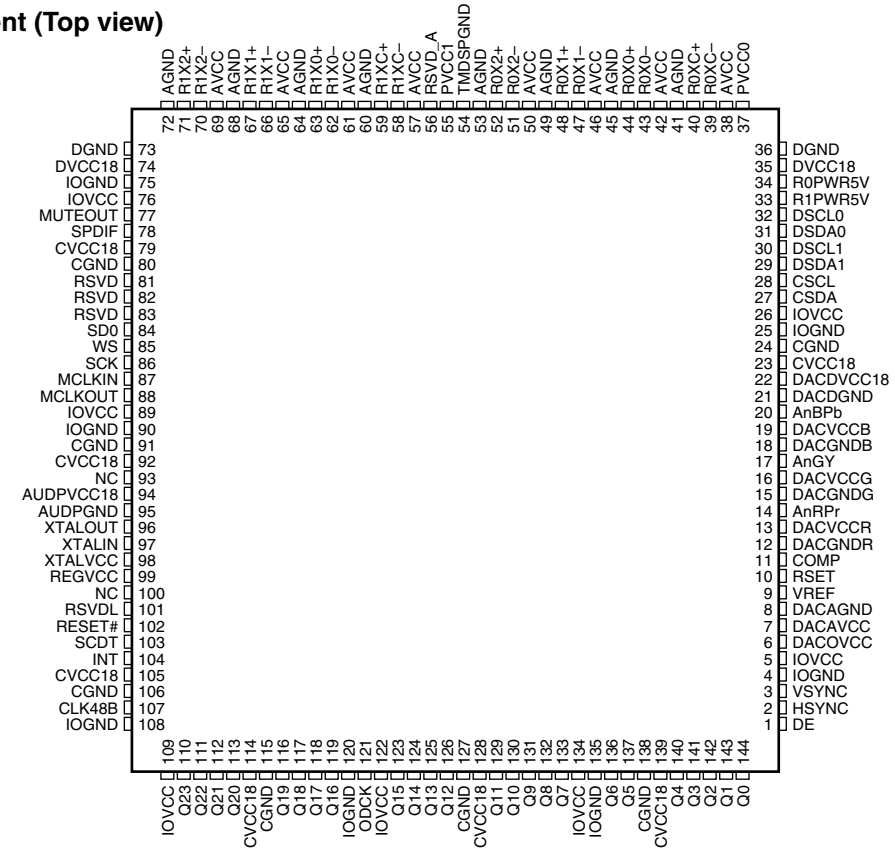
● Pin Function

Pin Type	No.	PIN Name	Pin Function
Inputs	54	RAIN	Analog input for converter R
	48	GAIN	Analog input for converter G
	43	BAIN	Analog input for converter B
	30	HSYNC	Horizontal sync input
	31	VSYNC	Vertical sync input
	49	SOGIN	Input for sync-on green
	38	CLAMP	Clamp input (External CLAMP signal)
	29	COAST	PLL COAST signal input
Outputs	70-77	Red [7 : 0]	Outputs of converter red, bit 7 is the MSB
	2-9	Green [7 : 0]	Outputs of converter green, bit 7 is the BSB
	12-19	Blue [7 : 0]	Outputs of converter blue, bit 7 is the BSB
	67	DATACK	Data output clock
	66	HSOUT	HSYNC output (Phase-aligned with DATACK)
	64	VSOUT	VSYNC output (Phase-aligned with DATACK)
	65	SOGOUT	Sync-on-green slicer output
Reference	58	REF BYPASS	Internal reference bypass
	37	MIDSCV	Internal midscale voltage bypass
	33	FILT	Connection for external filter components for internal PLL
Power Supply	39, 42, 45, 46, 51, 52, 59, 62	VD	Analog power supply
	11, 22, 23, 69, 78, 79	VDD	Output power supply
	26, 27, 34, 35	PVD	PLL power supply
	1, 10, 20, 21, 24, 25, 28, 32, 36, 40, 41, 44, 47, 50, 53, 60, 61, 63 68, 80	GND	Ground
Control	57	SDA	Serial port data I/O
	56	SCL	Serial port data clock (100 kHz maximum)
	55	A0	Serial port address input 1

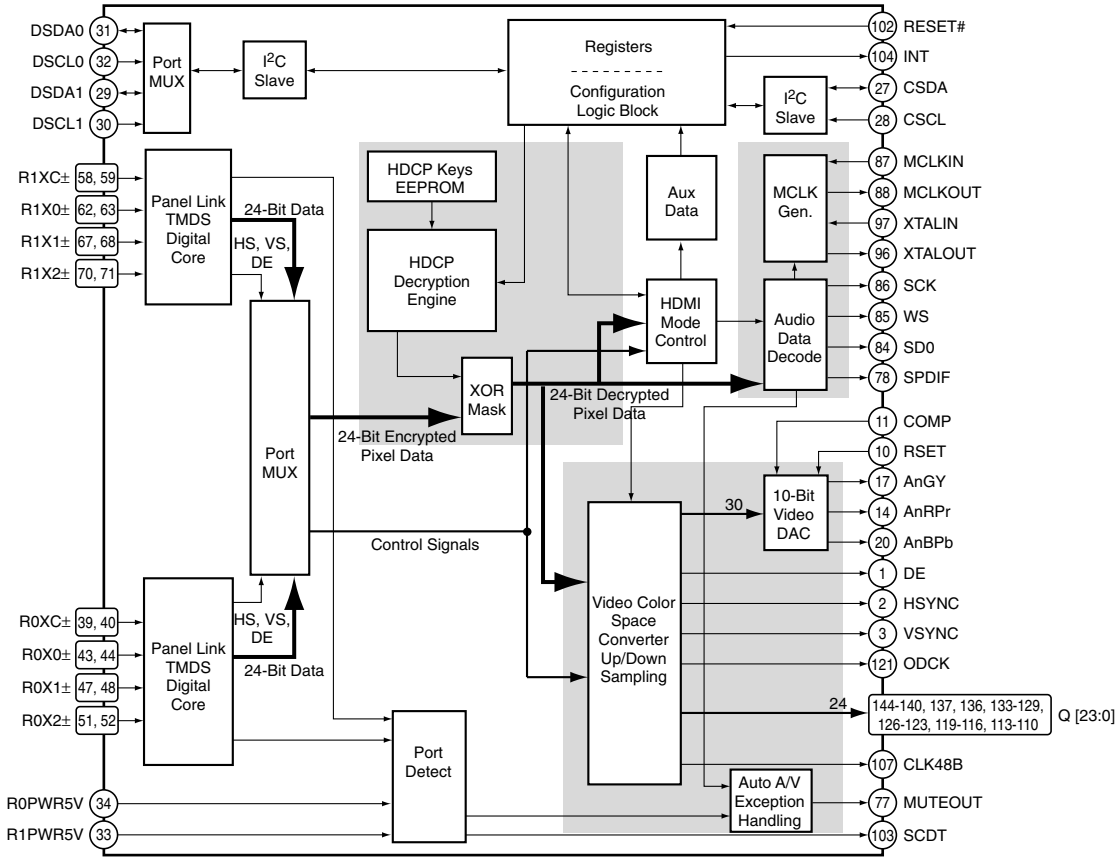
SII9021CTU (OBE MAIN ASSY : IC6404)

- HDMI Rx

● Pin Arrangement (Top view)



● Block Diagram



A

● Pin Function

No.	Pin Name	I/O	Pin Function
1	DE	O	Data enable
2	HSYNC	O	Horizontal sync output control signal
3	VSYNC	O	Vertical sync output control signal
4	IOGND	–	Input / output pin ground
5	IOVCC	–	Input / output pin VCC
6	DACOVCC	–	DAC output VCC
7	DACAVCC	–	DAC analog VCC
8	DACAGND	–	DAC analog ground
9	VREF	–	–
10	RSET	–	Full scale adjust resistor
11	COMP	–	Compensation
12	DACGNDR	–	DAC red ground
13	DACVCCR	–	DAC red VDD
14	AnRPr	O	Analog video red, Pr output
15	DACGNDG	–	DAC green ground
16	DACVCCG	–	DAC green VDD
17	AnGY	O	Analog video green, Y output
18	DACGNDB	–	DAC blue ground
19	DACVCCB	–	DAC blue VDD
20	AnBPb	O	Analog video blue, Pb output
21	DACDGND	–	DAC digital ground
22	DACDVCC18	–	DAC digital VCC
23	CVCC18	–	Digital logic VCC
24	CGND	–	Digital logic ground
25	IOGND	–	Input / output pin ground
26	IOVCC	–	Input / output pin VCC
27	CSDA	I/O	Configuration I^2C data
28	CSCL	I	Configuration I^2C clock
29	DSDA1	I/O	DDC I^2C data for port 1
30	DSCL1	I	DDC I^2C clock for port 1
31	DSDA0	I/O	DDC I^2C data for port 0
32	DSCL0	I	DDC I^2C clock for port 0
33	R1PWR5V	I	Port 1 transmitter detect
34	R0PWR5V	I	Port 0 transmitter detect
35	DVCC18	–	ACR PLL digital VCC
36	DGND	–	ACR PLL ground
37	PVCC0	–	TMDS port 0 PLL VCC
38	AVCC	–	TMDS analog VCC
39	R0XC–	I	TMDS input clock
40	R0XC+	I	TMDS input clock
41	AGND	–	TMDS analog ground
42	AVCC	–	TMDS analog VCC
43	R0X0–	I	TMDS input data
44	R0X0+	I	TMDS input data
45	AGND	–	TMDS analog ground
46	AVCC	–	TMDS analog VCC
47	R0X1–	I	TMDS input data
48	R0X1+	I	TMDS input data
49	AGND	–	TMDS analog ground
50	AVCC	–	TMDS analog VCC

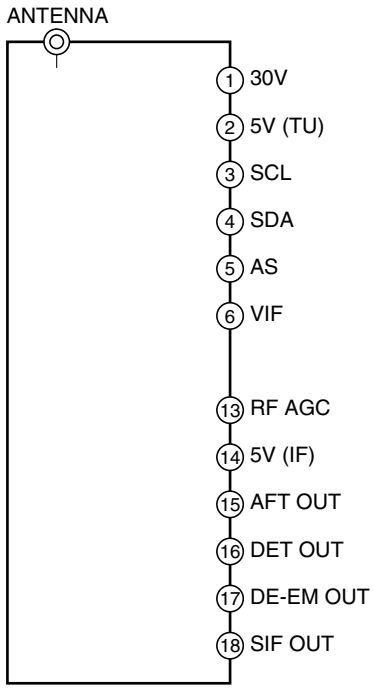
No.	Pin Name	I/O	Pin Function
51	R0X2–	I	TMDS input data
52	R0X2+	I	TMDS input data
53	AGND	–	TMDS analog ground
54	TMDSPGND	–	TMDS PLL ground
55	PVCC1	–	TMDS port 1 PLL VCC
56	RSVD_A	–	Reserved pin
57	AVCC	–	TMDS analog VCC
58	R1XC–	I	TMDS input clock
59	R1XC+	I	TMDS input clock
60	AGND	–	TMDS analog ground
61	AVCC	–	TMDS analog VCC
62	R1X0–	I	TMDS input data
63	R1X0+	I	TMDS input data
64	AGND	–	TMDS analog ground
65	AVCC	–	TMDS analog VCC
66	R1X1–	I	TMDS input data
67	R1X1+	I	TMDS input data
68	AGND	–	TMDS analog ground
69	AVCC	–	TMDS analog VCC
70	R1X2–	I	TMDS input data
71	R1X2+	I	TMDS input data
72	AGND	–	TMDS analog ground
73	DGND	–	ACR PLL ground
74	DVCC18	–	ACR PLL digital VCC
75	IOGND	–	Input / output pin ground
76	IOVCC	–	Input / output pin VCC
77	MUTEOUT	O	Mute audio output
78	SPDIF	O	S/PDIF audio output
79	CVCC18	–	Digital logic VCC
80	CGND	–	Digital logic ground
81	RSVD	O	–
82	RSVD	O	–
83	RSVD	O	–
84	SD0	O	I^2S serial data output
85	WS	O	I^2S word select output
86	SCK	O	I^2S serial clock output
87	MCLKIN	I	Audio master clock input reference
88	MCLKOUT	O	Audio master clock output
89	IOVCC	–	Input / output pin VCC
90	IOGND	–	Input / output pin ground
91	CGND	–	Digital logic ground
92	CVCC18	–	Digital logic VCC
93	NC	–	No connection
94	AUDPVCC18	–	ACR PLL VCC
95	AUDPGND	–	ACR PLL ground
96	XTALOUT	O	Crystal clock output
97	XTALIN	I	Crystal clock input
98	XTALVCC	–	ACR PLL crystal input VCC
99	REGVCC	–	ACR PLL regulator VCC
100	NC	–	No connection

No.	Pin Name	I/O	Pin Function
101	RSVDL	I	Reserved, must be tied LOW
102	RESET#	I	Reset pin, active LOW
103	SCDT	O	Indicates active video at HDMI input port
104	INT	O	Interrupt output
105	CVCC18	–	Digital logic VCC
106	CGND	–	Digital logic ground
107	CLK48B	I/O	Data bus latch enable
108	IOGND	–	Input / output pin ground
109	IOVCC	–	Input / output pin VCC
110	Q23	O	24-bit output pixel data bus
111	Q22	O	24-bit output pixel data bus
112	Q21	O	24-bit output pixel data bus
113	Q20	O	24-bit output pixel data bus
114	CVCC18	–	Digital logic VCC
115	CGND	–	Digital logic ground
116	Q19	O	24-bit output pixel data bus
117	Q18	O	24-bit output pixel data bus
118	Q17	O	24-bit output pixel data bus
119	Q16	O	24-bit output pixel data bus
120	IOGND	–	Input / output pin ground
121	ODCK	O	Output data clock
122	IOVCC	–	Input / output pin VCC
123	Q15	O	24-bit output pixel data bus
124	Q14	O	24-bit output pixel data bus
125	Q13	O	24-bit output pixel data bus
126	Q12	O	24-bit output pixel data bus
127	CGND	–	Digital logic ground
128	CVCC18	–	Digital logic VCC
129	Q11	O	24-bit output pixel data bus
130	Q10	O	24-bit output pixel data bus
131	Q9	O	24-bit output pixel data bus
132	Q8	O	24-bit output pixel data bus
133	Q7	O	24-bit output pixel data bus
134	IOVCC	–	Input / output pin VCC
135	IOGND	–	Input / output pin ground
136	Q6	O	24-bit output pixel data bus
137	Q5	O	24-bit output pixel data bus
138	CGND	–	Digital logic ground
139	CVCC18	–	Digital logic VCC
140	Q4	O	24-bit output pixel data bus
141	Q3	O	24-bit output pixel data bus
142	Q2	O	24-bit output pixel data bus
143	Q1	O	24-bit output pixel data bus
144	Q0	O	24-bit output pixel data bus

■ AXF1149 (OBE MAIN ASSY : U4401)

• Front End

● Pin Arrangement



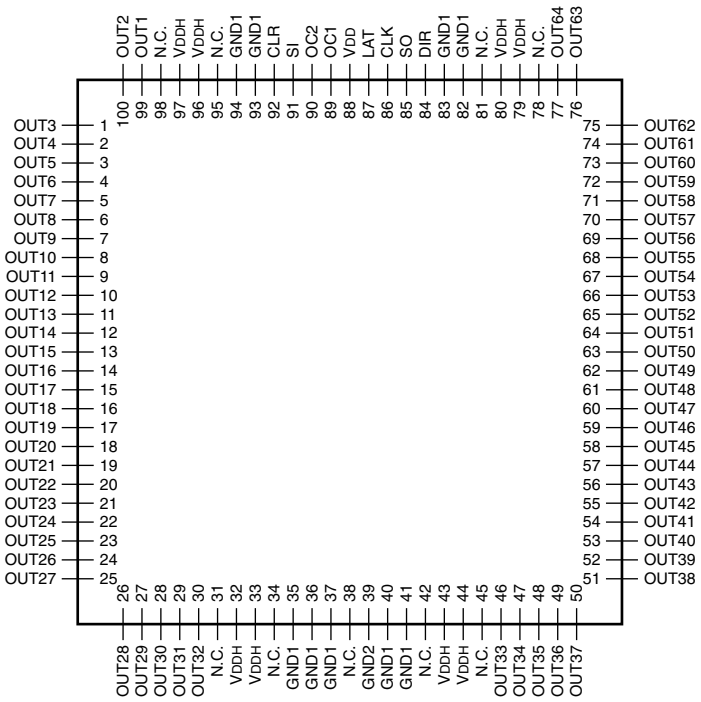
● Pin Function

No.	Pin Name	Pin Function
1	30V	Power supply for 30V
2	5V (TU)	Power supply for tuner
3	SCL	Terminal for I^2C bus control
4	SDA	
5	AS	
6	VIF	VIF output
13	RF AFG	RF AGC terminal
14	5V (IF)	Power supply for IF
15	AFT OUT	Analog AFT output
16	DET OUT	VIDEO output (Typical = 1.0Vp-p)
17	DE-EM OUT	Audio output
18	SIF OUT	SIF output

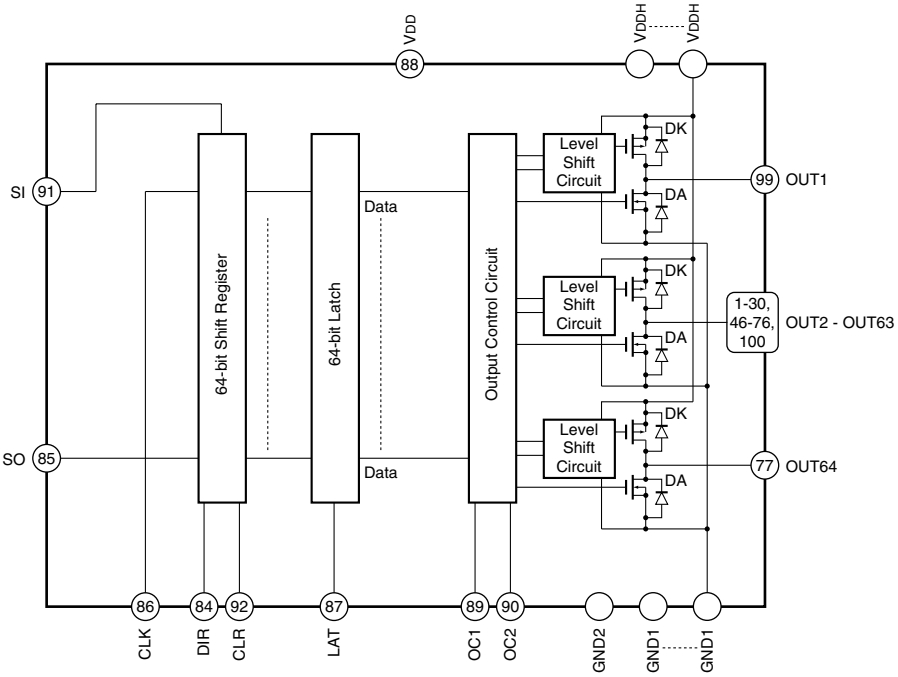
SN755870PZT (43 SCAN A ASSY : IC2701 - IC2706)
(43 SCAN B ASSY : IC2801 - IC2806)

• Plasma Display Panel IC

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

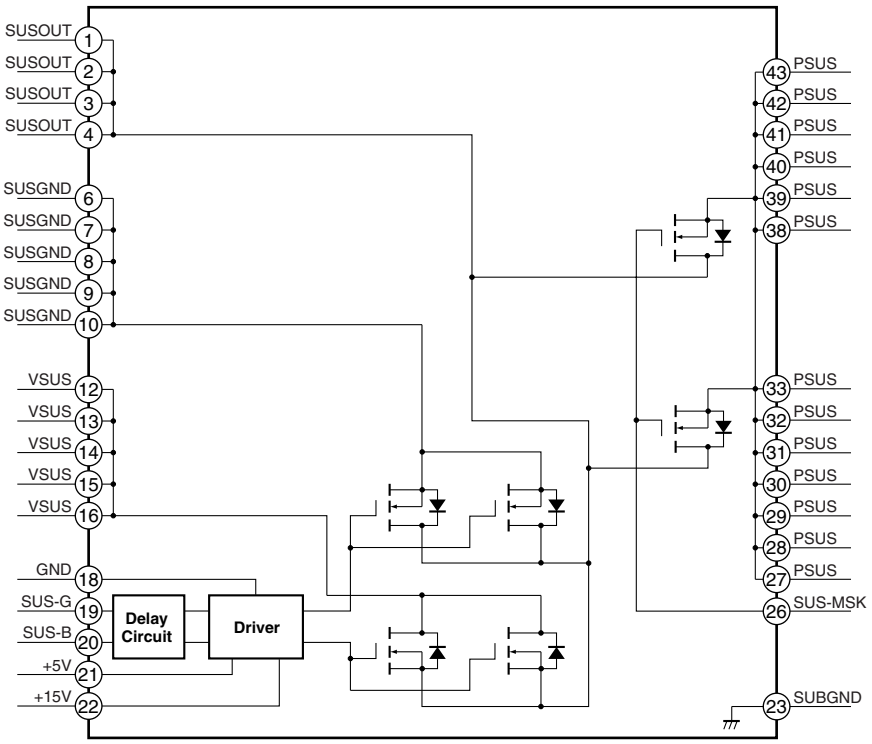
No.	Pin Name	I/O	Pin Function
1 - 30	OUT3 - OUT32	O	High-voltage push-pull output
31	N.C.	–	Not connected
32 - 33	V_{DDH}	–	High-voltage circuit supply
34	N.C.	–	Not connected
35 - 37	GND1	–	Ground
38	N.C.	–	Not connected
39	GND2	–	Ground
40 - 41	GND1	–	Ground
42	N.C.	–	Not connected
43 - 44	V_{DDH}	–	High-voltage circuit supply
45	N.C.	–	Not connected
46 - 77	OUT33 - OUT64	O	High-voltage push-pull output
78	N.C.	–	Not connected
79 - 80	V_{DDH}	–	High-voltage circuit supply
81	N.C.	–	Not connected
82 - 83	GND1	–	Ground
84	DIR	I	Setup of shift register shift direction L = Shift into reverse (SO → SI) H = Shift forward (SI → SO)
85	SO	I/O	Serial data input / output
86	CLK	I	Serial clock input Fetch SI or SO data to shift register by CLK rise edge
87	LAT	I	LAT data input L = Transfer shift register data to output latch H = Hold data to output latch
88	V_{DD}	–	Logic supply
89	OC1	I	Output control Control output according to the right truth value table
90	OC2	I	
91	SI	I/O	Serial data input / output
92	CLR	I	All output reset CLR pin : L → Normal operation CLR pin : H → All output High
93 - 94	GND1	–	Ground
95	N.C.	–	Not connected
96 - 97	V_{DDH}	–	High-voltage circuit supply
98	N.C.	–	Not connected
99 - 100	OUT1 - OUT2	O	High-voltage push-pull output

OC1	OC2	OUT
L	L	ALL Hi-Z
L	H	DATA
H	L	ALL L
H	H	ALL H

■ AXF1143 (43 X DRIVE ASSY : IC1202)

• X Mask Module

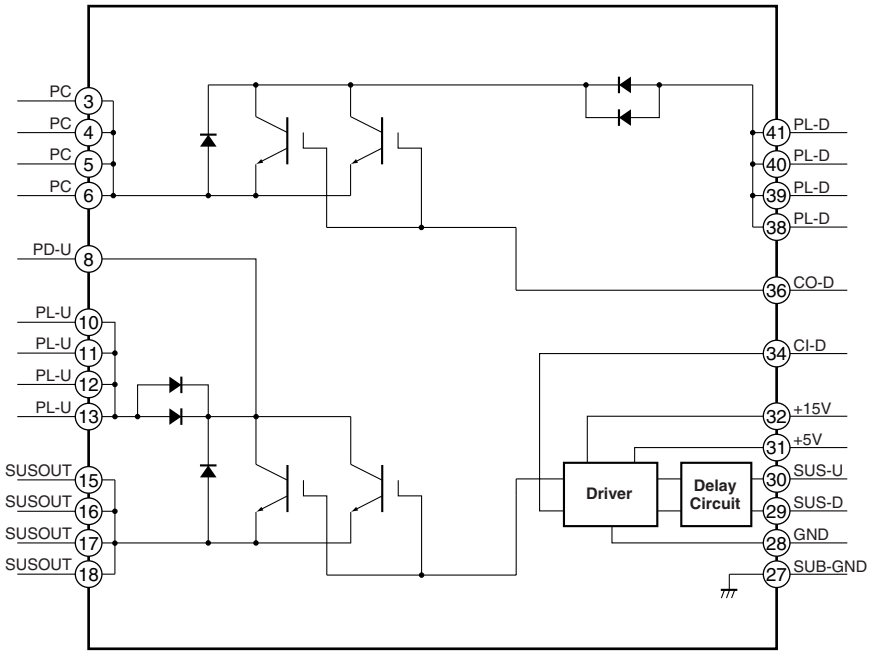
● Block Diagram



■ AXF1145 (43 X DRIVE ASSY : IC1101)
(43 Y DRIVE ASSY : IC2101)

• DK Module

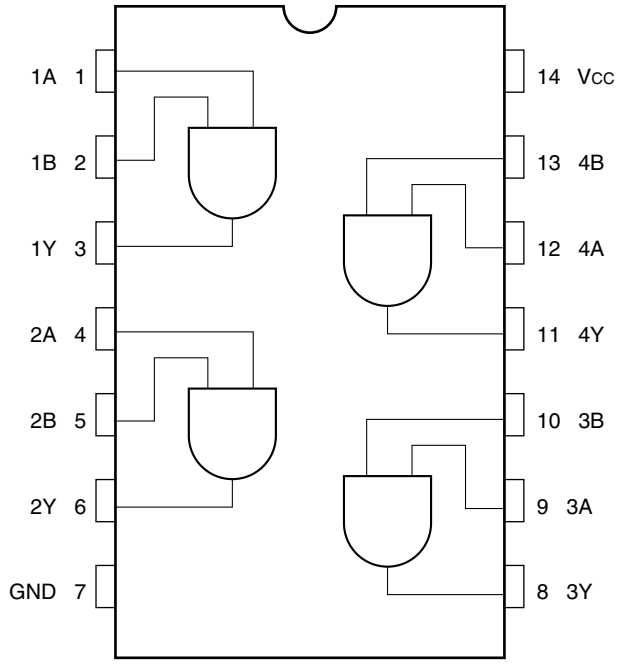
● Block Diagram



■ TC74VHC08FTS1 (43 Y DRIVE ASSY : IC2003, IC2005)

• Quad 2-input AND Gate

● Pin Arrangement (Top view) / Block Diagram



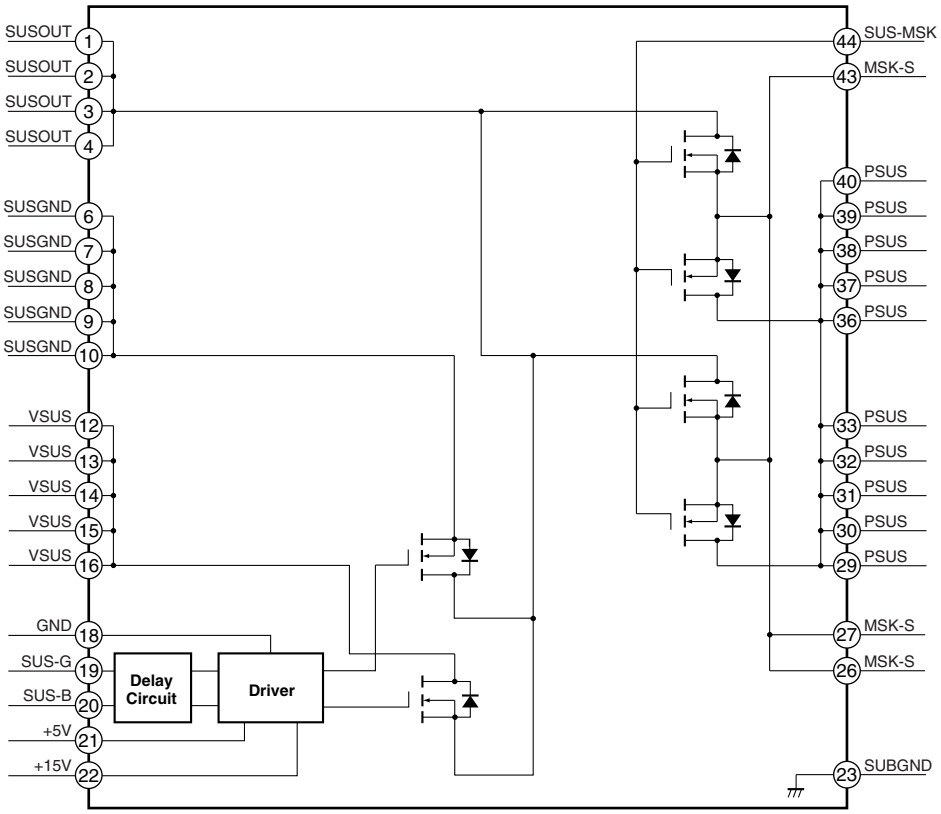
● Truth Table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

■ AXF1144 (43 Y DRIVE ASSY : IC2252, IC2253)

• Y Mask Module

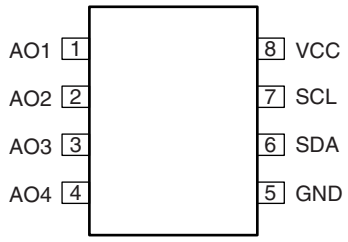
● Block Diagram



■ M62334FP (OB DIGITAL ASSY : IC3157)

• 8-bit 4ch I2C Bus D-A Converter with Buffer Amplifier

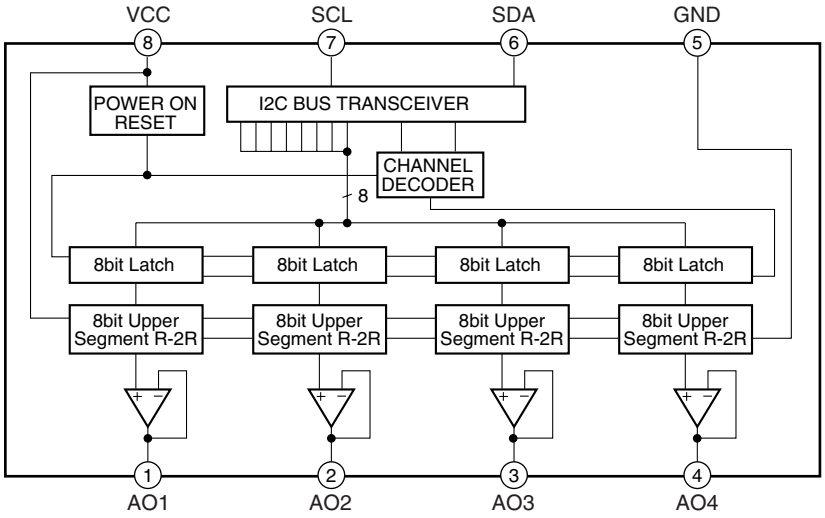
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	AO1	8-bit resolution D-A converter output
2	AO2	
3	AO3	
4	AO4	
5	GND	Ground
6	SDA	Serial data input
7	SCL	Serial clock input
8	VCC	Power supply

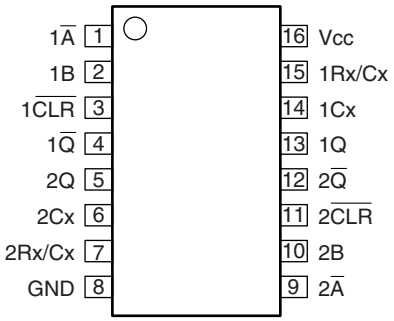
● Block Diagram



■ TC74VHC123AFTS1 (OB DIGITAL ASSY : IC3160)

• Dual Monostable Multivibrator/AFN/AFT Retriggerble

● Pin Arrangement (Top view)



● Truth Table

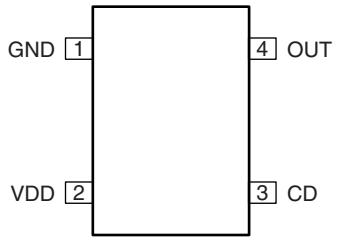
Inputs			Outputs		Note
$\overline{A}$	B	$\overline{CLR}$	Q	$\overline{Q}$	
↓	H	H	⎍	⎍	Output enable
X	L	H	L	H	Inhibit
H	X	H	L	H	Inhibit
L	↑	H	⎍	⎍	Output enable
L	H	↑	⎍	⎍	Output enable
X	X	L	L	H	Reset

X: Don't care

■ PST3610UR (OB DIGITAL ASSY : IC3304)

• Reset IC

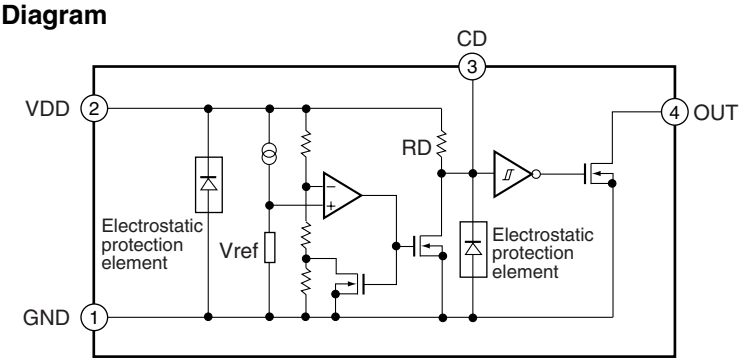
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	GND	Ground
2	VDD	Power supply / Voltage detection
3	CD	Capacitor connect pin for delay
4	OUT	Reset signal output

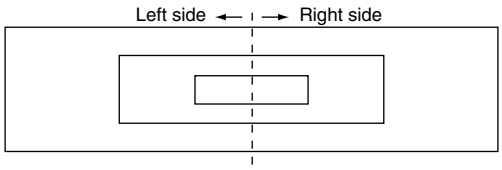
● Block Diagram



■ PEG122C (OB DIGITAL ASSY : IC3401)

• LSI for PDP video processing (SEQUENCE PROCESSOR)

● Pin Arrangement (Top view)



● Left side (Top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	
A	BAI5	GAI1	GAI4	GAI9	RAI4	RAI9	BBI0	BBI6	GBI1	GBI5	RBI1	RBI7	TRNSEND1	A
B	BAI4	GAI0	GND33	GAI8	RAI3	RAI8	HDI	BBI5	GBI0	GDN33	RBI0	RBI6	TRNSEND0	B
C	BAI3	BAI9	VDD33	GAI7	RAI2	RAI7	VDI	BBI4	BBI9	VDD33	GBI9	RBI5	VDD33	C
D	BAI2	BAI8	GAI3	GAI6	RAI1	RAI6	DEI	BBI3	BBI8	GBI4	GBI8	RBI4	RBI9	D
E	BAI1	BAI7	GAI2	GAI5	RAI0	RAI5	DCLKI	BBI2	BBI7	GBI3	GBI7	RBI3	RBI8	E
F	BAI0	BAI6	PEAK	APLDT	THEATER	GND12	VDD12	BBI1	VDD12	GBI2	GBI6	RBI2	VDD12	F
G	XSCAN20	XSCAN19	XSCAN18	XSCAN17	XSCAN16	VDD12								G
H	XSCAN15	XSCAN14	XSCAN13	XSCAN12	XSCAN11	VDDTC12								H
J	XSCAN10	GND33	VDD33	XSCAN9	GNDTC12	VDD12								J
K	XSCAN8	XSCAN7	XSCAN6	XSCAN5	XSCAN4	VDDTC12								K
L	XSCAN3	XSCAN2	XSCAN1	XSCAN0	GND12	VDD12					GND12	GND12	GND12	L
M	XSUS10	XSUS9	XSUS8	XSUS7	GNDTC12	VDD12					GND12	GND12	GND12	M
N	XSUS6	GND33	VDD33	XSUS5	GND12	VDD12					GND12	GND12	GND12	N
P	XSUS4	XSUS3	XSUS2	XSUS1	XSUS0	VDDTC12					GND12	GND12	GND12	P
R	ADRS0	ADRS1	ADRS2	ADRS3	GNDTC12	VDD12					GND12	GND12	GND12	R
T	TEST_I0	GND33	VDD33	TEST_I1	TEST_I2	TEST_R					GND12	GND12	GND12	T
U	TXOUTM063	TXOUTP063	GNDLA	VDDLA	GNDLA	VDDL12								U
V	TXCLKOUTM06	TXCLKOUTP06	GNDLA	VDDLA	GNDLA	VDDLA								V
W	TXOUTM062	TXOUTP062	GNDLA	VDDLA	GNDLA	VDDLA								W
Y	TXOUTM061	TXOUTP061	GNDLA	VDDLA	GNDLA	VDDL12								Y
AA	TXOUTM060	TXOUTP060	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	AA
AB	TXOUTM073	TXOUTP073	GNDLA	VDDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDBG	REFIN	AB
AC	TXCLKOUTM07	TXCLKOUTP07	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	AC
AD	TXOUTM072	TXOUTP072	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	AD
AE	TXOUTM071	TXOUTP071	GNDLA	TXOUTP033	TXCLKOUTP03	TXOUTP032	TXOUTP031	TXOUTP030	TXOUTP023	TXCLKOUTP02	TXOUTP022	TXOUTP021	TXOUTP020	AE
AF	TXOUTM070	TXOUTP070	GNDLA	TXOUTM033	TXCLKOUTM03	TXOUTM032	TXOUTM031	TXOUTM030	TXOUTM023	TXCLKOUTM02	TXOUTM022	TXOUTM021	TXOUTM020	AF

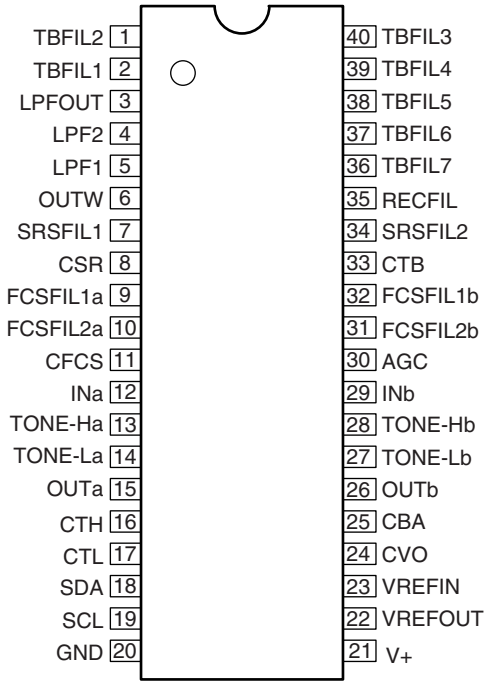
● Right side (Top view)

	14	15	16	17	18	19	20	21	22	23	24	25	26	
A	CLKD	VSSPA	EXDI011	EXDI09	EXA4	EXA10	EXA2	EXA16	EXA20	CSCS_N1	CSCS_N2	CSIOSCK1	CSIORXD	A
B	CSRD_N	VCCPA	EXDI04	GND33	EXA3	EXA9	EXA1	EXA15	EXA19	CSCS_N0	GND33	TCRAM_MONITOR0	TCRAM_MONITOR1	B
C	CLKS	CLK_MONI	EXDI012	VDD33	EXDI00	EXA8	CSWR_N	EXA14	EXA18	UARTRXD	VDD33	TCRAM_MONITOR2	CSIORQ	C
D	VSSPB	EXDI014	EXDI05	EXDI02	EXDI08	EXA7	EXA0	EXA13	EXA17	UARTTXD	CS10TXD	RESETX	SDIJTAG	D
E	VCCPB	EXDI07	EXDI013	EXDI010	EXDI01	EXA6	EXA11	EXA12	CSEXWAIT_N	SDITRST_N	SDITCK	SDIDBI_N	SDITMS	E
F	LPFMONI	EXDI015	EXDI06	EXDI03	VDD12	EXA5	VDD12	GND12	SDITDO	SDITDI	GPI000	GPI001	GPI002	F
G								VDD12	GPI003	GPI004	GPI005	GPI006	GPI007	G
H								VDDTC12	YSCAN20	YSCAN19	YSCAN18	YSCAN17	YSCAN16	H
J								VDD12	GNDTC12	YSCAN15	VDD33	GND33	YSCAN14	J
K								VDDTC12	YSCAN13	YSCAN12	YSCAN11	YSCAN10	YSCAN9	K
L	GND12	GND12	GND12					VDD12	GND12	YSCAN8	YSCAN7	YSCAN6	YSCAN5	L
M	GND12	GND12	GND12					VDD12	GNDTC12	YSCAN4	YSCAN3	YSCAN2	YSCAN1	M
N	GND12	GND12	GND12					VDD12	GND12	YSCAN0	VDD33	GND33	VSUS10	N
P	GND12	GND12	GND12					VDDTC12	YSUS9	YSUS8	YSUS7	YSUS6	VSUS5	P
R	GND12	GND12	GND12					VDD12	GNDTC12	YSUS4	YSUS3	YSUS2	VSUS1	R
T	GND12	GND12	GND12					YSUS0	RSV1	RSV0	VDD33	GND33	AFE_PS_N	T
U								VDDL12	GNDLA	VDDLA	GNDLA	TXOUTP050	TXOUTM050	U
V								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP051	TXOUTM051	V
W								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP052	TXOUTM052	W
Y								VDDL12	GNDLA	VDDLA	GNDLA	TXCLKOUTP05	TXCLKOUTM05	Y
AA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP053	TXOUTM053	AA
AB	VREF12	GNDBG	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDLA	GNDLA	TXOUTP040	TXOUTM040	AB
AC	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP041	TXOUTM041	AC
AD	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	TXOUTP042	TXOUTM042	AD
AE	TXOUTP013	TXCLKOUTP01	TXOUTP012	TXOUTP011	TXOUTP010	TXOUTP003	TXCLKOUTP00	TXOUTP002	TXOUTP001	TXOUTP000	GNDLA	TXCLKOUTP04	TXCLKOUTM04	AE
AF	TXOUTM013	TXCLKOUTM01	TXOUTM012	TXOUTM011	TXOUTM010	TXOUTM003	TXCLKOUTM00	TXOUTM002	TXOUTM001	TXOUTM000	GNDLA	TXOUTP043	TXOUTM043	AF

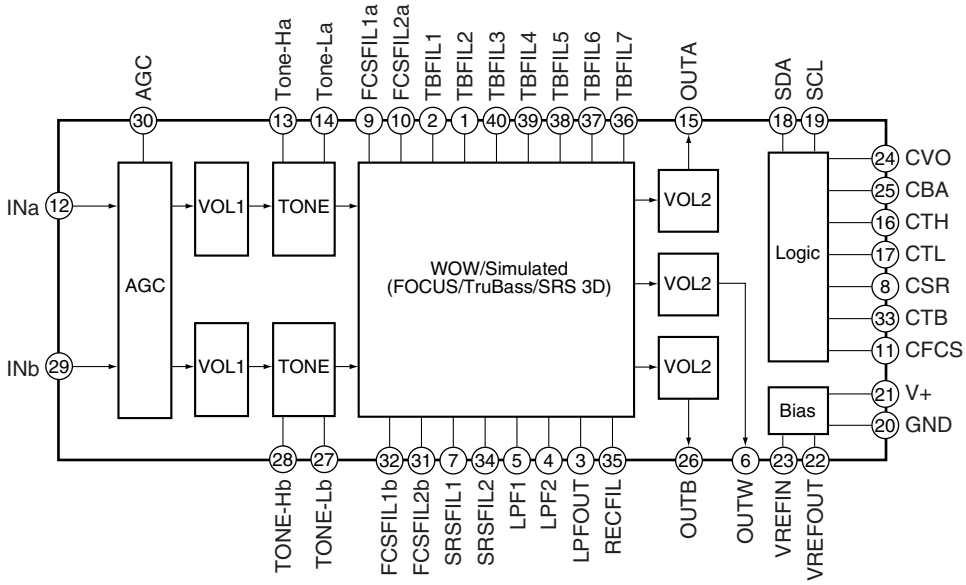
■ NJW1183GK1 (AUDIO ASSY : IC3753)

• FOCUS & SRS IC

● Pin Arrangement (Top view)



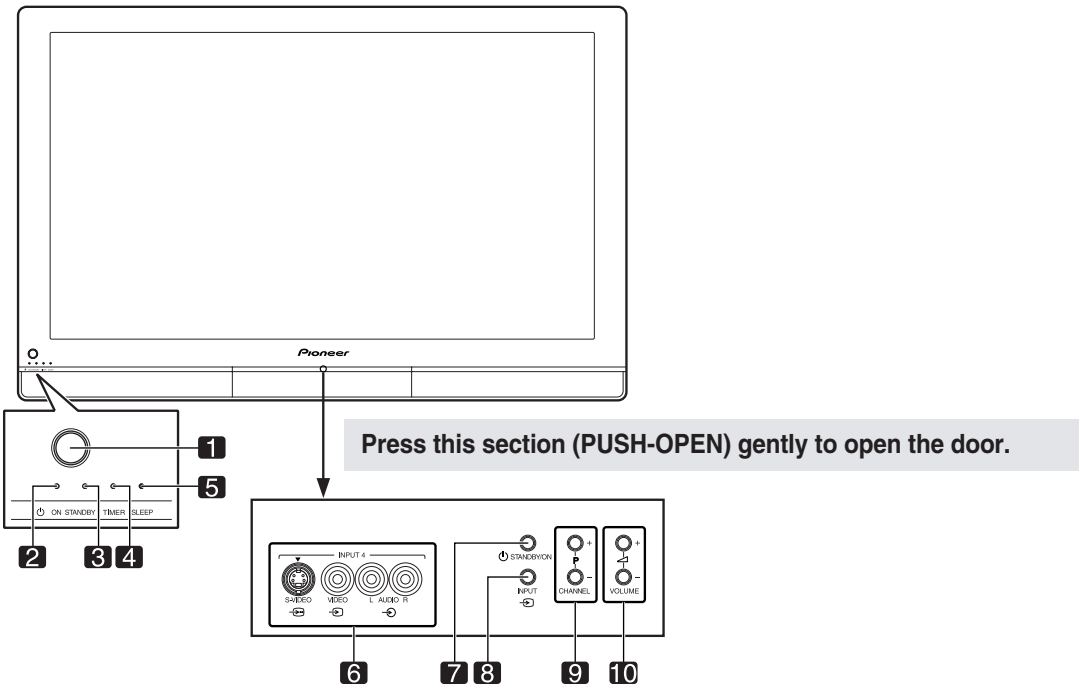
● Block Diagram



8. PANEL FACILITIES

Plasma Display

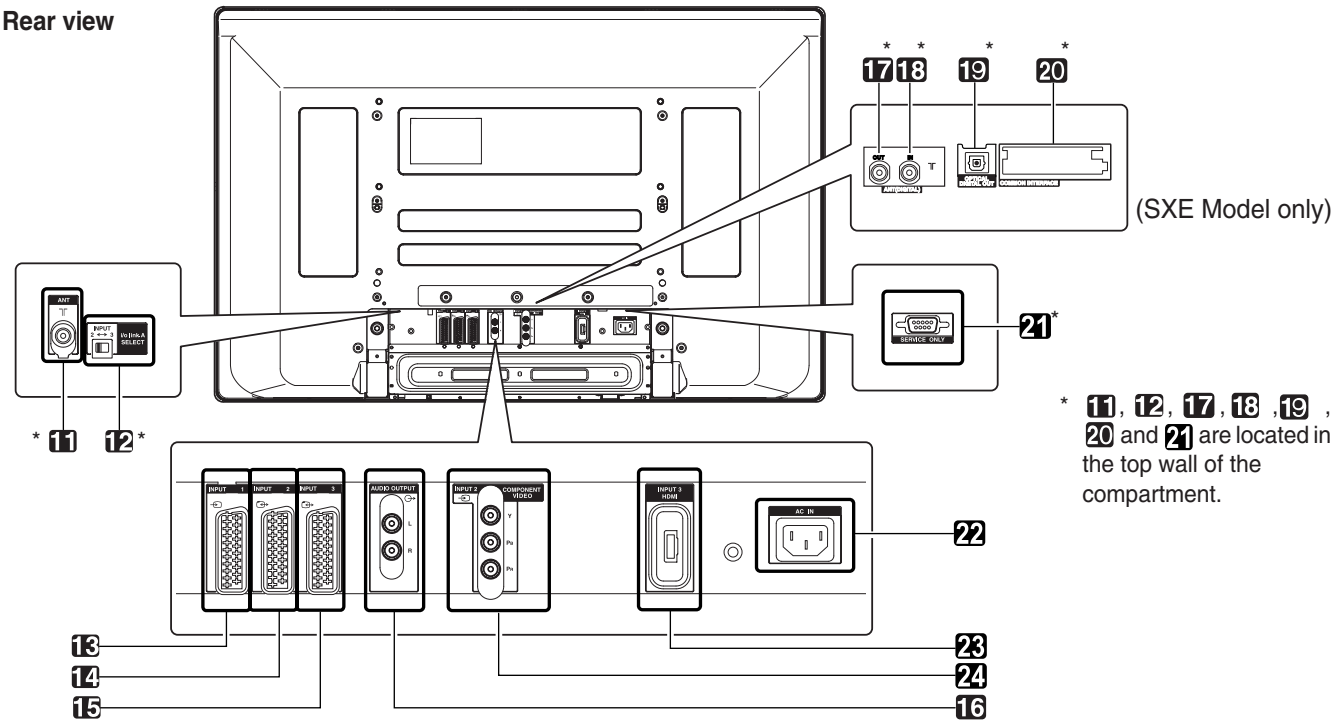
Front view



Press this section (PUSH-OPEN) gently to open the door.

1 **POWER** button
2 POWER ON indicator
3 STANDBY indicator
4 TIMER(SXE) /PIC OFF(RXE) indicator
5 SLEEP indicator
6 INPUT 4 terminals
7 **STANDBY/ON** button
8 **INPUT** button
9 **CHANNEL** +/– buttons
10 **VOLUME** +/– buttons

Rear view



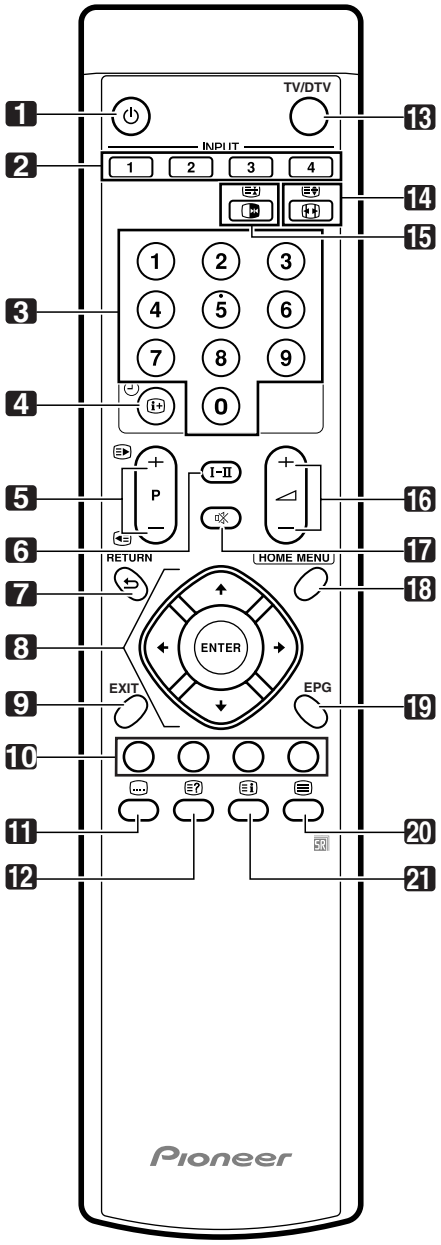
* **11**, **12**, **17**, **18**, **19**, **20** and **21** are located in the top wall of the compartment.

11 ANT (Antenna) input terminal
12 i/o link.A SELECT switch
13 INPUT 1 terminal (SCART)
14 INPUT 2 terminal (SCART)
15 INPUT 3 terminal (SCART)
16 AUDIO OUTPUT terminals (L - R)
17 ANT OUT terminal (Antenna through out)
18 ANT IN terminal (Antenna in for DTV)
- Power can be supplied through this terminal.

19 DIGITAL OUT terminal (OPTICAL)
20 COMMON INTERFACE slot
- For a CA Module with a smart card

21 RS232C terminal (used for factory setup)
22 AC IN terminal
23 HDMI terminal (INPUT 3)
24 INPUT 2 terminals (COMPONENT VIDEO:Y, P_B, P_R)

Remote control unit



NOTE

- When using the remote control unit, point it at the Plasma Display.

1 ⏻
Turns on the power to the Plasma Display or places it into the standby mode.

2 INPUT
Selects an input source of the Plasma Display. (INPUT 1, INPUT 2, INPUT 3, INPUT 4)

3 0 – 9
TV/External input mode: Selects a channel.
TELETEXT mode: Selects a page.

4
TV/External input mode: Displays the channel information.
DTV input mode: Displays the banner information.

5 P +/P –
TV/External input mode: Selects a channel.
/
TELETEXT mode: Selects a page.

6 I-II
Sets the sound multiplex mode.

7 RETURN
Restores the previous menu screen.

8 ↑/↓/←/→
Selects a desired itemon the setting screen.

ENTER
Executes a command.

9 EXIT (SXE only)
Returns to the normal screen in one step.

10 Colour (RED/GREEN/YELLOW/BLUE)
TELETEXT mode: Selects a page.

11
TV/External input mode: Jumps to the Teletext subtitle page.
DTV input mode: Turns subtitle on and off.

12
Displays hidden characters.

13 TV/DTV (SXE only)
Switches between the TV and DTV input modes.

14
TV/External input mode: Selects the screen size.

TELETEXT mode: Switches Teletext images. (full/upper half/lower half)

15
TV/External input mode: Freezes a frame from a moving image. Press again to cancel the function.

TELETEXT mode: Stops updating Teletext pages. Press again to release the hold mode.

16 +/ –
Sets the volume.

17
Mutes the sound.

18 HOM E MEN U
TV/External Input mode: Displays the Menu screen.

19 EPG (SXE only)
Displays the Electronic Programme Guide.

20
Selects the TELETEXT mode.
(all TV image, all TEXT image, TV/TEXT image)

21
TELETEXT mode: Displays an Index page for the CEEFAX/FLOF format. Displays a TOP Over View page for the TOP format.

■ Jigs list

Jig No.	Name	Remarks
GGD1170	40P Extension FFC	Diagnosis of OB DIGITAL Assy at power on state

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008